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ABSTRACT

Information on organizations and individuals involved in research on postsecondary education (PSE) in Canada was obtained through a survey of 435 organizations, a survey of 817 individuals, and through requests for information appearing in two publications. Methods of disseminating research results on the role of the Social Sciences and Humanities Research Council (SSHRC) of Canada were also examined. Research on PSE covers reflective inquiry and scholarship, empirical investigation, and critical analysis. Within the universities, such research is undertaken by academics and graduate students in faculties of education, especially in centers for the study of PSE, but much more is done in other faculties and departments, notably economics, sociology, psychology, and history. It is estimated that throughout Canada there are roughly 750 individuals engaged in research on aspects of PSE, about a third of them full time. The full-time researchers are primarily analysts in university and college institutional research groups or government departments and agencies. Almost all of the academics involved are part-time PSE researchers and for the majority of them, PSE is an area of secondary interest. The only scholarly association for which PSE is a matter of central interest is the Canadian Society for the Study of Higher Education (CSSHE). More long-term studies are needed and more that are interprovincial or national in scope. A lack of agreement on major themes and a lack of an integrating agent is noted, and it is recommended that CSSHE serve as a integrating agent. Recommendations to the CSSHE and to the SSHRC are included. The questionnaires and a list of respondents are appended. (Author/SW)

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RESEARCH ON POSTSECONDARY EDUCATION IN CANADA

A review for the
Canadian Society for the Study of Higher Education
and the
Social Sciences and Humanities Research Council of Canada

coordinated by

EDWARD SHEFFIELD

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FOREWORD

There is little doubt that timing and form are major determiners of the impact of reports presenting results of studies of postsecondary education--or of any field of study, for that matter. The several major provincial studies of education undertaken in the late 1960s and 1970s document this point. Although they were in most instances conducted with acceptable rigour and thoroughness, their impact is at best unclear. It is difficult to point to specific constructive changes that have emerged directly from them.

In the case of the review reported here, it is very clear that the dimension of timeliness is significantly present. While order and direction cannot be said to characterize the published reports of the study of postsecondary education, a modest but significant literature has now accumulated. Thus it is time that an attempt was made to pull together and at least partially assess this brief history as a basis for planning for the future. This review is also timely in the context of the critically important discussions now taking place with regard to the manner in which the provinces and the federal government will continue their support of postsecondary education.

On the matter of form, the document speaks for itself. With regard to the study of postsecondary education, the experience and competence of its author are unmatched in Canada. This is an unembellished statement and assessment--almost at times an indictment--of research on postsecondary education in Canada by perhaps the only man in Canada capable of a valid attempt at such a task. The Canadian Society for the Study of Higher Education was fortunate in attracting Professor Edward Sheffield's interest in this assignment and in securing support from the Social Sciences and Humanities Research Council of Canada. The reader will discover that the task has been completed with distinction.

In sum, this is an important statement presented at a critical time in the development of postsecondary education in Canada and in a form that demands attention and action. I predict that it will have the impact that it deserves.

W.A.S. SMITH

President
Canadian Society for the
Study of Higher Education

The University of Calgary
November 1981

PREFACE

Research on postsecondary education (PSE) is important.

Involved in PSE at any one time are more than a million of our 24 million people, and over five million citizens are products of institutions of postsecondary education in the sense that they have attended our colleges, institutes of technology or universities. Annual expenditures on postsecondary education had reached nearly $6 billion by 1981 (Statistics Canada).

The federal government's goal is that we in Canada should be spending 1.5% of GNP on research and development of all kinds. If 1.5% of total annual expenditures on postsecondary education were devoted to research and development in that field, the amount would be in the neighborhood of $90 million--at least ten times the amount actually being devoted to such activities.

And it is not as if there were no unanswered questions. On the contrary, the history of the enterprise is inadequately documented, goals are only dimly perceived, the characteristics of effective teaching are poorly understood, little is known about the outcomes of PSE, the formulation of public policy in the field requires constant analysis and re-analysis, and the problems of financing and management of systems, sub-systems and individual institutions of postsecondary education persist in forms old and new.

Yes, research on postsecondary education is important, yet the field is relatively undeveloped.

Much of the credit for bringing about this review of the state of research on postsecondary education belongs to Jeffrey Holmes and Max von Zur-Muehlen of the Education, Science and Culture Division, Statistics Canada. They saw much evidence of the need for improvement in the research effort, and set about systematically to document the situation, starting with their own organization. In March 1979 they called interested people from across the country to participate in a Statistics Canada colloquium on "Data Needs of Higher Education in the 1980s." Then they turned their attention to the Canadian Society for the Study of Higher Education (CSSHE) of which both were founding members in 1970. They saw the Society as a key in the campaign, and steered the programs of its annual conferences in 1979, 1980 and 1981 toward the review. This was facilitated by the fact that von Zur-Muehlen was a member of the Society's executive council throughout that period, while Holmes was vice-president and chairman of the program committee in 1980 and president in 1981. As vice-president and chairman of the program committee in 1981, Robin Harris of the University of Toronto added his significant contribution.

The papers invited for the conferences of 1979, 1980 and 1981 together provided a wealth of information and opinion on research activities and impediments in the field. It became evident, however, that a systematic review of the state of research would require financial support beyond the resources of the Society. It was decided, therefore, to seek funds for that purpose from the Social Sciences and Humanities Research Council of Canada (SSHRC). It was known that the Council was engaged in re-examination of its role in support of research in professional fields related to the social sciences and humanities, one of which was education, so a grant application was first made in 1980.

It was not until March 1981, however, that the Council announced its plan. For several years it had been concerned about the small number of research grant applications received from members of university faculties of education, and the abnormally low percentage of such applicants who were awarded grants. Why should this be? What could the Council do to improve the situation? (As we shall see later, members of faculties of education represent only a fraction of the people engaged in research on postsecondary education so the problem as identified by the SSHRC applied much less to the sub-field of postsecondary education than to that of elementary and secondary education.)

The Council invited three groups of education researchers--the Canadian Association of Deans of Education, the Canadian Society for the Study of Education and the Canadian Society for the Study of Higher Education--to review their respective segments of the field and to report to Miles Wisenthal, the coordinator engaged by the Council to prepare for it an integrated report. The CSSHE received a grant of $8,000 for the purpose.

The first step in the review was to make a plan and discuss it with members of the CSSHE at their annual conference in June 1981. Next, there were the 17 previously prepared papers to digest. Finally, to fill some of the gaps and to encourage participation in the review by organizations and people engaged in the field, two questionnaires were devised and mailed. One (Appendix A) was for senior officers of organizations (universities, colleges, institutes, associations, and government departments and agencies) thought likely to have research on postsecondary education as at least part of their work. The other (Appendix B) was for individuals thought likely to be engaged in research on postsecondary education. Both questionnaires were sent to 435 organizations, and the latter to an additional 817 individuals. A special invitation to comment was issued as an advertisement in University Affairs, and Canadian members of the Association for Institutional Research were invited to participate by a note in the AIR Newsletter. Then there was a postal strike from June 30 to August 11.

Summer was a poor time for a mail questionnaire and the postal strike discouraged many potential respondents. The relatively small percentage of returns (68 or 16% from organizations and 109 or 13% from individuals) meant that they could not be assumed to be representative. Nevertheless, they were helpful on many points. Those who responded to the questionnaires are listed in Appendix C.

A draft report of the review was completed at the end of September and sent for checking and comment to the 15 members of the CSSHE Executive Council and 78 others. They are listed in Appendix D. Fifty-eight (62%) of them responded.

In addition to Jeffrey Holmes, Max von Zur-Muehlen and Robin Harris, whose contributions have been acknowledged earlier, I want to say how much I appreciate the work done by those who prepared papers for the annual conferences of the Society in 1979, 1980 and 1981. Without that groundwork by such experts it would have been impossible to cover the field. Finally, I wish to acknowledge the thoughtfulness of those who responded to the questionnaires, and the helpful suggestions of those who read the draft report.

EDWARD SHEFFIELD

Ottawa, November 1981

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1. SUMMARY AND RECOMMENDATIONS

Summary

Research on postsecondary education (PSE) covers a wide range --reflective inquiry and scholarship, empirical investigation and critical analysis. It is not limited to the independent research of academics but includes also studies and analyses by institutional researchers in universities, colleges and institutes and by their counterparts in associations and government departments and agencies.

Within the universities, such research is undertaken by academics and graduate students in faculties of education, especially in centres for the study of PSE, but much more is done in other faculties and departments, notably economics, sociology, psychology and history. Not counting research on their own teaching undertaken by university, college and institute staff members and the research of private consultants (whose numbers were difficult to guess), it is estimated that throughout Canada there are roughly 750 individuals engaged in research on aspects of PSE, about a third of them full time.

Of these 750, about 15 are academics in centres for the study of PSE, another 25 in other departments of faculties of education and perhaps 90 in other faculties; 120 are graduate students, 200 are university administrative personnel, 100 are in CEGEPs, community colleges, and institutes of technology, 45 in associations and 150 in government departments and agencies.

Those doing PSE research on a full-time basis are for the most part analysts in university and college institutional research groups or government departments and agencies. Almost all of the academics involved are part-time PSE researchers and for the majority of them (at least 90 out of 130) PSE is an area of secondary interest.

Taking these conditions into consideration, it is not surprising that research on PSE is sporadic and unintegrated. The principal group of academics for which it is a matter of primary interest are the few in centres for the study of PSE, so they have a special obligation to act as catalysts to encourage participation by their academic colleagues whose appointments are in other fields and disciplines. The only scholarly association for which it is a matter of central interest is the Canadian Society for the Study of Higher Education, so it has a special obligation to bring a measure of coherence to the field.

One of the weaknesses of most PSE research in Canada is that its scope is limited--to the present, plus or minus a few years, and to particular institutions or provinces. More long-term studies are needed and more that are interprovincial or national in scope. In part this weakness may be due to the lack of agreement on major themes, in part to the lack of an integrating agent.

Regarding themes, research is needed on all major aspects of PSE:

- Purpose, goals
- Access, admission
- Curriculum
- Teaching and learning
- Assessment and certification
- Research and scholarship
- Community service
- Outcomes
- Institutional government
- Institutional management
- Finance
- System structure and relations.

As an integrating agent and to augment the resources available to pursue both independent and oriented research on PSE, it is proposed that the CSSHE be strengthened and challenged to realize its potential.

Recommendations

Throughout the report there are hints, suggestions and formal recommendations designed to improve the quantity and quality of research on PSE in Canada. The eight formal recommendations are regrouped here according to the organizations to which they are directed.

- To the Canadian Society for the Study of Higher Education

(1) It is recommended that CSSHE conference themes be chosen for several years in advance and that individual conferences be planned at least two years before they are to take place. (See page 52)

(2) It is recommended that the CSSHE establish its own professional secretariat. (See page 57)

(3) It is recommended that the CSSHE explore the feasibility of publishing reports of research on postsecondary education in an inexpensive format. (See page 61)

(4) It is recommended that the CSSHE explore the feasibility of periodical publication of abstracts, in English and French, of Canadian research on postsecondary education. (See page 65)

- To the Social Sciences and Humanities Research Council of Canada

(5) It is recommended that the SSHRC introduce a systematic program of adjudicated research grants to voluntary associations in the social sciences and humanities, including those whose focus is on postsecondary education. (See page 70)

(6) It is recommended that the SSHRC add "education and employment" to the themes to which it allocates special funds for strategic grants. (See page 71)

(7) It is recommended that the SSHRC increase its grants to journals. (See page 72)

(8) It is recommended that the SSHRC increase further its administrative support of learned societies. (See page 72)

2. SCOPE

For the purpose of this review, postsecondary education includes community colleges, CECEPs, institutes of technology, and universities and related institutions (most of them affiliated colleges), and the studies and research in which their students and staff are engaged. The term "higher education" also has this meaning for many people but is sometimes thought to be more restrictive. Hence the choice, for the review, of the more comprehensive term.

Research is interpreted broadly to include reflective inquiry and scholarship, empirical investigation, critical analysis and in-house studies for organizational use. It may be oriented to theory building, problem solving, policy formulation, or planning.

In the compilation of its annual inventory of education research supported by the provincial government, the Quebec ministry of education has developed a useful classification:

> "(1) research in the strict sense--a process of creation of new knowledge undertaken in a systematic and rigorous fashion, with reference to a theoretical and methodological frame of reference appropriate to one or several disciplines;
>
> "(2) research in the broad sense (study and analysis)--a process of creation of new knowledge undertaken in a systematic and rigorous fashion, but in a disciplinary and methodological context less rigid than that of research in the strict sense;
>
> "(3) experimental development--the procedure enabling the conversion of knowledge acquired in the course of research to operational programs, including demonstration projects undertaken for the testing and evaluation of these programs."
>
> (Translation) (Québec, 1981)

One of the salutary implications of this classification is that respectability is imputed to a wide range of types of investigation. That is obviously one thing needed in the field because many researchers are apologetic about their mode of investigation, too easily accepting the narrow notion that only theory-oriented inquiry can be true research.

In discussions of this sort, it is not unusual to distinguish between discipline and field, noting that postsecondary education (indeed, education in general) is not a discipline but rather an interdisciplinary field of study, drawing upon such disciplines as history, philosophy, psychology, sociology, economics and political science. Only occasionally does postsecondary education behave like a true discipline, one which has developed distinctive generalizations with universal application. Will it, too, become a discipline in the course of time? Why not?

Postsecondary education draws not only on basic academic disciplines but also on several applied sciences: systems analysis, for example, and administrative science.

One of the interesting things about the disciplines and fields to which postsecondary education is related or on which it draws, is that when people in those disciplines or fields do research on aspects of postsecondary education they tend to think of themselves still as working in their own field. An historian writing a university history would be surprised if it were suggested that he was engaged in research on postsecondary education. Professors in medical faculties investigating medical education think of themselves as members of the medical community, not educationists, and relate to that community rather than to other people working on problems of education in the professions. Members of offices of institutional research tend to think of themselves as management analysts, and so on.

All of which suggests that postsecondary education is not only a field rather than a discipline, but also it comes out second best in many situations where researchers have double roles. So we have another problem with research in postsecondary education. Not only do many people doing research in the field doubt whether what they are doing is really research, but also many fail to recognize that, according to one point of view at least, they are working in the field of postsecondary education. Research in postsecondary education--poor orphan! An ill-defined activity in an ill-defined field.

Are there, then, no straight educationists devoted to the study of postsecondary education as such? Less than a score in all Canada--as we shall see.

3. ORGANIZATIONS AND INDIVIDUALS INVOLVED IN RESEARCH ON PSE

There are three main groups of organizations in which research on PSE is undertaken: institutions of PSE, associations of institutions and people involved in PSE, and government departments and agencies concerned with PSE. Also there are private consultants.

Institutions of Postsecondary Education

These include: (1) universities and related institutions, and (2) community colleges, including CEGEPs, and institutes of technology.

Universities and related institutions

Universities employ scholars who may do research on PSE, and the universities normally provide modest research funds to assist the projects, of whatever kinds, faculty members tackle. In addition, among members of their administrative staff there are usually some who spend some, if not most, of their time on research related to the university's own affairs. Occasionally a university will also commission research if members of its own administrative staff lack the necessary time or appropriate expertise.

Research on PSE is seldom undertaken in "related institutions," most of which are university affiliates, but they are users of the results of research done elsewhere.

Members of university centres for the study of PSE

There are seven universities in which groups of staff and graduate students specialize in the study of postsecondary or higher education: Victoria, British Columbia, Calgary, Alberta, Manitoba, Toronto (Ontario Institute for Studies in Education) and Montréal. In all of these the PSE unit is in the faculty of education (OISE at Toronto) and in most of them it is part of or associated with the department of educational administration.

At each of Victoria, British Columbia, Calgary and Manitoba, there is one staff member devoted full time to PSE; at Alberta there are two in the faculty of education and a third in the faculty of extension; at Toronto there are three in OISE and a fourth in the faculty of education of the University; at Montréal there are four. Of these 15 staff members only two report that they spend more than half of their time on PSE research.

During the decade of the seventies their graduate students completed more than 80 master's and 70 doctoral theses on aspects of PSE. At any one time perhaps 20 graduate students are working full time and 40 part time on their theses.

Descriptions of some of these PSE programs were prepared for the 1981 conference of the Canadian Society for the Study of Higher Education (Murphy, 1981; Dennison, 1981; Konrad, 1981; Gregor, 1981; Sutherland, Kachkowski and Pascal, 1981).

With respect to research output, the most prolific are the professors and students of UBC, Calgary and Alberta, where the emphasis is on the community college, though not to the exclusion of the university and systems of PSE. Especially noteworthy are the series of studies on the community college in British Columbia by John Dennison (UBC) and his colleagues, work on organization development and program evaluation by Paul Adams (Calgary), research on institutional renewal and on the governance of community colleges throughout Canada by Abram Konrad and James Small (Alberta), and on continuing education by Duncan D. Campbell (also at Alberta).

The Victoria and Manitoba programs began in 1979 and have not yet had time to make many contributions to research. Worth noting though, is the work of Alexander Gregor (Manitoba) on PSE systems, and the current orientation of the Manitoba unit toward research on instructional development.

For some years the emphasis at Toronto was on the university. Robin Harris concentrated (sill does) on the history of universities and my own chief interest before retiring from the University in 1977 was in systems of higher education. Charles Pascal, who was chairman of the Higher Education Group at OISE from 1977 to 1981, stressed instructional development and the community college. Michael Skolnik, who became acting chairman in 1981, emphasizes the relationship between education and employment and is investigating also the impact of financial restraint on higher education. The other full-time members of the Group, Cicely Watson and Ian Winchester, include among their interests demography, planning, administration, analysis of educational systems, and the history and philosophy of higher education.

At the Université de Montréal, Marcel de Grandpré and André Girard are interested in international comparisons, Gaëtan Daoust does notable work on continuing education and Avigdor Farine is much involved in research on the relation between education and employment.

The academic staff of such centres are almost the only faculty members in the universities whose primary interest is in the study of PSE. They may be expected, therefore, to have perspective on the whole field and to help to integrate the efforts of the many others whose interest in PSE is secondary.

Others in faculties of education

Apart from those in centres for the study of PSE, there are a few professors of education who have a sustained commitment to the field, and some who turn their attention from time to time to research on PSE. The most favoured objects of their studies are instructional design, evaluation, the teaching profession and adult education, but other topics are examined as well. Examples include the work of Gordon Campbell (Lethbridge) on the community college in Canada, Hugh Stevenson (Western Ontario) on the history of federal-provincial relations, G. Loken (Calgary) on teacher supply and demand; at Alberta, Hayden Roberts on adult education and Glen Eyford on learning in the community; at OISE, George Tracz on university management, M.L. Handa on inequality in education, J. Holland and S. Quazi on the professoriate, and D.F. Burrill, W.P. Olivier and R.S. McLean on the teaching of statistics; and at McGill, Margaret Gillett on women in higher education.

Such people may add another 25 or so to the number of educationists doing some part-time research on PSE, and perhaps 10 full-time and 20 part-time graduate students of education.

Members of other faculties

The PSE research activities of academics who are members of faculties other than education are of two kinds: those related to the field of PSE and those related to their own function as teachers. The former are typified by a sociologist's study of access to PSE in Canada, the latter by a medical faculty member's examination of bases for the selection of entrants to the M.D. course in his own university. The distinction is in some ways analogous to that between strategy and tactics.

With respect to the first category, reviews of research on PSE during the 1970s by academics in, or using the approaches of, the disciplines of history, philosophy, economics, sociology and psychology were prepared for the 1981 conference of the CSSHE. These papers dealt not only with themes and researchers, as summarized below, but also with the substance of the research reviewed. Other disciplines and fields that might have been represented include political science, public administration, business administration, and law.

History

Reviewing research published in English, D. McCormack Smyth (1981) drew attention first to general historical works, and singled out, among others, A History of Higher Education in Canada 1663-1960 by Robin Harris, Catholic Post-Secondary Education in English-Speaking Canada: A History by L.K. Shook, Ontario's Educative Society by W.G. Fleming and "A History of the National Conference of Canadian Universities, 1911-1961" by Gwendoline Pilkington. It would have been appropriate to add "The Economy, Government and the Universities of Ontario: 1945-1971" by Paul Axelrod.

Among recent institutional histories, he found most notable those of McMaster University by Charles Johnston, of Queen's by Hilda Neatby, of Western Ontario by John Gwynne-Timothy and of McGill by Stanley Frost.

(Fewer than half of the works just listed were written by members of university departments of history.)

Philosophy

Turning to philosophical contributions, Smyth mentioned reflections on the purposes and goals of institutions of higher education by Wilder Penfield, J.A. Corry, Claude Bissell, Percy Smith, Walter Johns, William Sibley, W.L. Morton, Murray Ross, Northrop Frye, Cyril Belshaw and J.M. Cameron. He might have referred also to Francis Leddy, Howard Adelman and James Hartman. (Only one of these men is a member of a university department of philosophy although three others once were. Other than these four, they came from the disciplines of medicine, political science, English, classics, history, sociology, and anthropology, by way, in most cases, of administrative roles, especially that of president.)

It was planned that there should also be a review of research on the historyand philosophy of PSE in French Canada, but the invited scholar was not able to carry out the project.

Economics

Economic studies of PSE published in English were reviewed by David Stager (1981) and those in French by Clément Lemelin (1981).

Stager began by observing that there was much less research on the economics of higher education during the latter part of the 70s than in the first part. His explanation was that the human capital model, so popular in the late 60s, lost its novelty and, in addition, the assumed contribution of education to productivity was challenged. He noted, too, that negotiations between the federal and provincial governments regarding the financing of postsecondary education encouraged the consideration of alternatives. That activity diminished, however, and federal support for PSE became so indirect that there seemed little reason to sponsor related research.

"The topics addressed by researchers in Canada," he said, "were the same as those treated elsewhere: resource allocation, and particularly returns to investment in higher education; productivity of educational institutions; alternative modes for financing institutions and students, together with the redistributive effects of these; some determinants of demand for places; and rationalization of the supply of places through educational and manpower planning."

Among those he mentioned as contributors to this research were: B. Ahamad, John A. Buttrick, Gail C.A. Cook, John F. Crean, Paul Davenport, David A. Dodge, John F. Graham, J.R. Cameron, E.B. Harvey, Walter Hettich, John W. Holland, Peter M. Leslie, Ozay Mehmet, Noah M. Meltz, S.G. Peitchinis, Pierre-Paul Proulx, Bernard S. Sheehan, M.L. Skolnik, David A.A. Stager, Max von Zur-Muehlen, E.G. West, and D.T. Wright. (Most but not all of these are or were members of university departments of economics.)

He reported that the current research emphasis is on the flow of persons through the system, the employment experience of graduates, the economic impact of educational institutions on their communities, and resource allocation within faculties and other divisions of individual universities. "In general," he said, "current research activities tend to be more descriptive, and less analytical than the work done a decade ago, or to repeat the earlier work with a localized data set."

As for the future, Stager advocated emphasis on "the link between education and earnings. Questions of alternative arrangements for organizing instruction, and for financing the costs of higher education are important," he said, "but the research in these areas has run far ahead of political understanding. Researchers made their basic contributions. Apart from occasional efforts to explain the alternatives and their implications more clearly, there is little to be done until the debate moves to more sophisticated levels." He concluded: "There is still so much to be done, however, in fundamental research on the acquisition and substitutability of skills, on the determinants of employment income, and the linkages between these factors and private, individual career decisions, public policy decisions on provision of post-secondary places, and the development of alternative training and/or screening mechanisms."

Like Stager, Lemelin (1981) noted a diminution in studies of the economics of higher education in recent years and explained that education is no longer thought to be the certain key to economic growth: "L'éducation n'est plus porteuse des espoirs québécois de développement économique."

Lemelin grouped recent French-language PSE research by economists under five headings: the overall effort of Québec society; schooling and the labour market; individual demand for education; attempts at planning higher education; and professors' conditions of work. He observed that there was literally a host of studies--many of them undertaken in departments or agencies of the Québec government and too many of them revealing a short term view, responding to immediate needs and problems.

The restricted bibliography presented in his paper contained more than 200 titles. Among the university faculty members listed, most of them in departments of economics, were: Gérard Bélanger, Avigdor Farine, M. Pelteau, Guy Girard, Gilles Guérin, Rachèle Houle, Robert Lacroix, Clément Lemelin, Pierre-Paul Proulx, Ruth Rose-Lizée and François Vaillancourt.

According to Lemelin, needed research includes a review of the various follow-up studies of graduates, systematic studies of the costs of the various activities of institutions of postsecondary education, and studies of the newly-important part-time and adult student communities. He pled for collaboration between economists and sociologists who so often work on aspects of the same problem without comparing notes. As an example of a rich bank of data which should be mined by both groups he cited the ASOPE (Aspirations scolaires et orientations professionnelles des étudiants) project, a longitudinal study of student educational aspirations and vocational inclinations which is being directed by sociologist Pierre W. Bélanger of Laval. Lemelin went further, advocating the creation of a new "structure de rencontre" which would encourage contacts between the diverse researchers working in the field.

Sociology

Robert Pike (1981) opened his review of sociologists reporting in English by observing that sociologists of higher education are "rather rare birds" in English Canada. It was his impression, though, that "Quebec sociologists, partly perhaps because of the relatively close interlinkage between education and political ideology in the province but also because of the sense of the almost organic interconnection between educational change and profound social change elsewhere in the society...are more likely...to give attention in their studies to the relationship of education ...to the whole society...."

The main research themes he reported were: inequality and higher education (including sociological perspectives on change; socio-economic status and postsecondary participation; social background, higher education and occupational selection; and social causes); higher educational organizations; student attitudes, values and behaviour; and the academic profession. Others mentioned only briefly were: higher education and Canadianization; the social role of universities and colleges in adult and continuing education; and the interlinkage between race, ethnicity and participation in higher education. In Pike's opinion, only the first theme, inequality, is being well explored, and most projects are limited in scope to a single province.

The paper concluded with a bibliography of the work of academics doing sociological research on PSE during the 70s, the majority of them in university departments of sociology. Included were: Paul Anisef, Raymond Breton, B.Y. Card, R. Charlton, S. Dasgupta, J.T. Davis, A.M. Decore, Oswald Hall, Edward Harvey, C. Jansen, John A. Lee, Jos Lennards, D.W. Livingston, Linda K. Moffat, R.S. Pannu. Robert M. Pike, John Porter, and T.H. Williams.

Pike's suggestions for further research included the study of socio-economic background, gender and patterns of program choice within institutions of PSE; alternative modes of PSE with particular reference to the roles of community colleges both as channels for the facilitation of inter-generational social mobility and as agencies for the strengthening and legitimation of existing class barriers; the part feeder colleges and distance learning institutions may play in facilitating access to PSE for rural youth and adults; the nature and formation of public attitudes towards PSE; whether 'stay-outs' have particular socially ascriptive and intellectual characteristics; the social characteristics and attitudes of members of institutions' boards of trustees; institutional change and organizational conflict; student and faculty attitudes; student attitudes and behaviour and patterns of faculty-student interaction compared in a variety of contrasting institutional settings; the part-time employment of students and its motivation; and finally, a comprehensive study of Canadian academics on the model of that undertaken in Britain a decade ago by A.H. Halsey and Martin Trow.

A companion review of sociological research published in French was invited but was not made available.

Psychology

In her review of the contribution of psychology to Canadian higher education, Janet Donald (1981) reported first on her analysis of the articles published in the Canadian Journal of Higher Education 1971-1980. Administration accounted for 30%, economics 20%, philosophy and history 20%, sociology 20% and psychology 10%. But "a scan of 5 years of articles in the Canadian Journal of Behavioral Science from 1975 to 1980 produced 47 articles with the university student as subject." She concluded that "there is an abundance of psychological research available on higher education, in part because university students are a favoured source of subjects for psychological research."

The main research themes Donald identified were cognition and learning, the evaluation of learning, instruction, teaching methods, the evaluation of teaching, student characteristics, methods of student selection and preparation, university organization and operation, and program evaluation.

"Overall," she wrote, "the review of psychological contributions to higher education in Canada gives us a set of factors which could affect higher education rather than a set of effects. We have some knowledge in the areas of cognition and learning and in the evaluation of learning, but much more to do to make it applicable in the university setting. The area of university instruction is better studied, and could be fruitfully disseminated. Student characteristics are virtually undocumented in the literature in any systematic fashion, though the research suggests a variety of factors which merit study. [Can we suppose anything about the outcome of a university education if we do not understand the nature of our students? she asked.] Research on the organization of the university and on program evaluation provides hints of steps to be taken. All of the research reported shows potential significance, but the degree of impact is questionable, except in particular cases where psychologists have acted as academic planning consultants. The greatest gaps occur in the ordered or systematic pursuit of a defined research area: the work on student ratings of teaching is an exception to this."

Included among the persons whose work was listed in Donald's bibliography were: P.C. Abrami, J. Bavelas, P.A. Cranton, M. Demers, J.G. Donald, S.F. Foster, C. Furedy, F. Gagné, C. Knapper, L. Leventhal, J. Martin, H.G. Murray, A. Paivio, J. Quarter, N. Segalowitz, A.M. Sullivan, R.E. Traub, P. Waxer, and A.D. Yarmey.

Like Lemelin, Donald proposed the creation of a new agency, in her case an institute for research on higher education "which would provide a setting for organized and continued study of three areas. The first would be centered on the problems of student learning and the nature of learning and knowledge. The second would be oriented to the fuller development of faculty and students within the context of a learning community. The third area would be the organization of the university, with special emphasis upon how decisions are made and what criteria and information are used in making them."

In a recent article prepared for Canadian Psychology, Christopher Knapper (1981) examined college teaching research over the 70s--part of the field covered by Janet Donald. He grouped his observations under three main headings: instructional innovations, instructional evaluation, and characteristics of students, teachers and courses.

His review "reveals a long list of methodological shortcomings:" the use of an inadequate criterion measure; neglect of individual differences; reliance on quantitative data for its own sake; the lack of longitudinal studies; the lack of cross-cultural studies; the neglect of the special learning problems of such groups as native peoples and immigrants.

Although Knapper doubted "whether Canadian research in college teaching has made any significant contribution to the academic and theoretical discipline of psychology," he did demonstrate that it has had considerable impact on practice.

Other disciplines

As for the other disciplines which seem to have the potential to contribute to research on PSE--political science, public administration, business administration, and law--no reviews were invited by the CSSHE for its 1981 conference.

Academics devoted to the study of political science occasionally show an interest in the government of universities or the structures and processes of systems of PSE, as often as not through the medium of a government-appointed or association-sponsored commission of inquiry. Examples since 1970 include the Commission on the Relations between Universities and Governments, sponsored by the Canadian Association of University Teachers and the Association of Universities and Colleges of Canada and involving René Hurtubise (law), Donald Rowat and B.B. Kymlicka (both political science); the examination of university research for the Association of Universities and Colleges of Canada, by Louis-Philippe Bonneau (engineering) and J.A. Corry (political science); the review of systems of higher education in Canada, sponsored by the International Council on Educational Development and involving five people, two of whom (Duncan D. Campbell and B.B. Kymlicka) were political scientists, though in Campbell's case with a considerable overlay of "higher education"; the several provincial ad hoc commissions on PSE (at least one in each province in the past 15 years), involving not more than half a dozen political scientists including B.B. Kymlicka (again); the SSHRC's commission on graduate studies and research in the humanities and social sciences, made up of Dennis Healy (French), Léon Dion (political science) and Blair Neatby (history); and the recent study of university financing undertaken for the AUCC by Peter Leslie (political science). Mention may be made also of the study of Federalism and Policy Development: the case of adult occupational training in Ontario by J. Stefan Dupré et al. (1973) and David Cameron's study for the Ontario Economic Council--The Northern Dilemma: Public Policy and Post-Secondary Education in Northern Ontario (1978).

As one goes over these examples, not a single specialist in public administration shows up, although some of the political scientists named above may be in this category. There is, however, a little to report from business administration. Since 1975 the School of Business of the University of Western Ontario has been operating an annual summer course for senior university administrators. One faculty member of that course (W.G. Nediger) and three graduate students of business (B. Miller, W. Cook and Bernard Garnier) have undertaken research on aspects of university administration. A project by another faculty member was that of R.G. Adams (industrial relations) who was responsible recently for a study of educational leave and productivity for the federal Department of Labour.

Also, in recent years there has been a concerted drive by faculties of business management to expand in order to cope with the demand for admission, and also to re-examine the curriculum. This has sparked much study and analysis, some of it on behalf of the Canadian Federation of Deans of Management and Administrative Studies (referred to later) and some within individual faculties.

There is a growing body of legal research with respect to PSE, one of the earlier contributions being Collective Bargaining for University Faculty in Canada by B.L. Adell and D.D. Carter (1972). Since then there have been several conferences on the university and the law, to each of which research papers were presented. Currently, Margaret McCaughan of the University of Alberta is preparing a book on the general legal problems confronting universities. With the increase in litigation involving institutions of PSE, one would expect in the future more PSE-related research by members of university faculties of law.

How many people in faculties other than education engage from time to time in research on PSE? One might guess, say, 10 in history, 20-30 in economics, 10-20 in sociology, 30-40 in psychology, and perhaps 10 others --a total that might reach between 80 and 100 plus, say, 10 full-time and 20 part-time graduate students.

If the earlier estimates of 40 staff members and 90 graduate students in education are added, the total number of academics who may be involved in research in the field of PSE (apart from those examining their own teaching, about whom more will be said immediately below) could be estimated at approximately 130 plus about 120 graduate students, making a total of roughly 250 in university faculties.

Another indication of the variety of backgrounds of academic researchers working in the field is provided by an analysis of Canada Council and SSHRC research grants awarded for projects in PSE between 1970-71 and 1979-80. In those 10 years there were 123 awards in support of projects in the field of PSE, with percentages by discipline as shown in TABLE 1. Note that only 20% were in education.

When examining the contributions of members of faculties other than education to research on PSE, it is relevant to note that most such professors make occasional forays into the field rather than work in it on a continuing basis. Also, few of them offer courses that provide their students with an opportunity to see the applications of their discipline to PSE.

Nevertheless, the importance of such academics to research on PSE is evident. Still another indication is that among respondents to the questionnaire who reported that they engage from time to time in research on aspects of PSE, a third were academics in disciplines and fields other than education, and they constituted more than two-thirds of the academics reporting PSE research.

Staff working on curriculum development and the improvement of teaching and learning

Many universities have pedagogical services or instructional development programs, staffed by people who, for the most part, are members of the teaching corps, especially in faculties of education and departments of psychology. Most of them do research on aspects of teaching and learning. A good example is the Centre for Teaching and Learning Services at McGill University. Not only are its half-dozen staff members active in PSE research, but they supervise graduate students whose theses make further contributions to the field.

It is usual for instructional development programs to have funds for distribution to departments or individual faculty members in support of research or experimentation in curriculum design, material or media; the applications of technology; teaching methods; the evaluation of teaching; assessment of student progress, and so on. Whether they receive financial support for it or not, university teachers in many disciplines undertake studies and engage in experiments related to their own teaching and the learning of their students. Two professors of engineering conduct a controlled experiment in the use of contrasting styles of teaching. A professor of chemistry seeks to discover what induces the updating of laboratory courses. A professor of anaesthesia tests the efficacy of computer-based non-linear programs of multiple-choice questions and explanations in adding to students' knowledge. A professor of forest management develops a practicum in land management and land use planning.

TABLE 1. Canada Council/SSHRC research grants in support of projects in the field of PSE, by discipline, 1970-71 to 1979-80

Discipline	No.	%
Education	25	20
History	30	24
Philosophy	7	6
Economics	9	7
Psychology	27	22
Sociology	17	14
Political Science	5	4
Others	3	2
TOTALS	123	99

Source: Sheffield, 1979; updated from SSHRC annual reports.

It is incongruous but too often true, however, that investigation and experiment of this kind is not given appropriate recognition by either the professor's colleagues or the administration.

Another curious fact is that programs intended to lead to the improvement of teaching are seldom if ever paralleled by programs intended to lead to improvement of the university's other chief function, research.

Some disciplines are much more active than others in research on curriculum, teaching and learning. As will be elaborated later, several of them have national associations that not only examine the state of research, and lobby for more money, but also study admissions, courses of study and instruction in their particular fields.

Mention has been made of the interest shown by faculties of education in research on teacher education and the teaching profession. Faculties of medicine are equally interested in research on medical education and the medical profession. Reference has been made also to the investigations of their problems by faculties of business management and administrative studies. Other groups worthy of mention in this connection (most of them engaged in professional education) include those in adult education, chemistry, engineering, language and literature, law, library science, nursing, physical and health education, political science, psychology, social work and sociology. A current project of the Société québécoise de science politique, for example, is a study of the evolution of that discipline in Québec since 1960.

No attempt has been made to estimate how many people, not already counted, may be engaged in research on curriculum, teaching and learning.

University administrative personnel

Presidents, vice-presidents, business officers, personnel officers, information officers, research administrators, deans, department heads, registrars, admissions officers.... The list of university administrative offices is long. Almost all of them must be constantly analyzing the problems they face. Some of this analysis is sufficiently deep and sophisticated to have the character of research. This is particularly true of institutional self-studies undertaken by special committees or task forces. Current examples are the review of its goals by the University of Alberta, and Opération Projet Laval. These are but two of many that could be cited.

Some of the larger universities have established offices of institutional research, which Bernard Sheehan defines as "the study and analysis of the operations, environments and processes of institutions of higher education in order to provide information to support decision making"--particularly in connection with planning and budgeting (1979). Of all the people in the universities who engage in research on PSE, the skilled analysts with which these offices are staffed are the ones who normally devote full time, or nearly full time, to it.

Canadian university members of the Association for Institutional Research, a mostly American body, number more than 120. The total number of institutional researchers in Canadian universities is probably much larger than that. It might be estimated that the number of university administrative officers who engage in research on PSE is of the order of 200, of whom perhaps half do so for more than 50% of their working time.

Undoubtedly, most of the research of university administrative personnel is for the internal use of their own institutions. Occasionally, however, someone gets interested in extending the range of investigation or in making interinstitutional, interprovincial or even international comparisons.

Community colleges, institutes of technology

Community colleges (including CEGEPs) and institutes of technology normally do not expect their teachers to engage in research, except occasionally with respect to teaching and curriculum, including some work on student services, continuing education and Canadian studies. These institutions do undertake administrative research, though few of them have offices of institutional research of the kind found in the universities. There are, however, nearly 30 Canadian college and institute members of the Association for Institutional Research (more than half of them in British Columbia). Some institutional studies are commissioned, often to private management consultants.

Of the PSE research that can be reported, one thinks, for example, of Gordon Jones of the Vancouver Community College who has worked for years with John Dennison of UBC on aspects of the community college in British Columbia, studies of manpower training needs by the B.C. Occupational Training Council, of compensation for chief executive officers of colleges and of standards for learning resources centres in colleges and institutes by the B.C. Management Advisory Council, and of graduates of colleges and institutes by the B.C. Academic Council. An example of an individual project is a paper on "The Consequences of Obtaining a Degree in Middle Adulthood," presented to the Canadian Psychological Association in 1981 by L.R. Morey of Malaspina College, Nanaimo. Other examples in the western provinces are few because most of the research on PSE is done in the universities or in provincial government departments.

Peter Bartram of Seneca College (1980) has reviewed the literature of the Ontario colleges of applied arts and technology 1965-1976. While the range of his review went far beyond reports on research, it is interesting to note that the main themes, in order of frequency of treatment, were aims and objectives, curriculum, administration, staff, and students. With respect to author-occupations, Bartram found government departments and employees the chief sources, followed by colleges and their employees, chiefly administrators. "Only seven items [out of 266] were by college teachers," he noted, "and three of these were theses."

The situation in Quebec is much different. Among the research projects funded by the Ministère de l'Education in 1980-81 were more than two score undertaken in, and by personnel of, the CEGEPs (Québec, 1981). In the Atlantic provinces, however, where there are few community colleges and institutes of technology, there is little to report.

Most of the published articles by college and institute personnel are largely descriptive. It seems likely that some of the more analytical work is done in-house and is not published.

Another indication of the activity of college and institute researchers is provided by the admittedly incomplete AUCC Inventory of Research into Higher Education in Canada (Houwing and Kristjanson, 1981). Of the 49 projects of college and institute staff members, 31 were in the CEGEPs of Québec, 11 in Ontario CAATs and seven in colleges and institutes in the western provinces. Curriculum and teaching was the favoured category (29 out of 49), followed by students (8), "general" (5), continuing education (4), administration (3) and staff (1).

A rough estimate of the number of college and institute staff members engaged from time to time in research on PSE is 100, none of them for more than half time.

In relation to the importance of community colleges and institutes of technology there is relatively little research going on in or about them. Much more is needed.

Associations

Institutions and people involved wholly or marginally in PSE have formed scores of associations to serve the interests of their members. There are associations of scholars, of institutions, of academic divisions, of administrative officers, of faculty, of students and of mixed membership. Some are provincial in scope, some are international, but most are national, pan-Canadian.

...of scholars

The Royal Society of Canada was established in 1882 as "a national academy whose object is the promotion of learning and research in the arts and sciences." Its members, who are elected, are scholars from all fields. Once in a while its transactions (which are published) will include a contribution or a series of contributions on the universities or on research, and occasionally the Society sponsors a special study in the field, or joins with another association for a conference or symposium on some aspect of higher education. Examples in recent years include discussion of "The Role of the University and Scholarship in Contemporary Society" at the 1973 annual meeting; a symposium, in cooperation with the Association of Universities and Colleges of Canada, on "The University of the Future" in 1976; in 1978 a published report, The Press of Knowledge, commissioned by the National Research Council and prepared by the Society's Committee on Publication Policies and Practices for Research Journals and other periodicals in Science and Engineering in Canada; and in 1981, The Written Word, papers presented to a symposium on creative and scholarly writing.

Although not an honorary society, the Association canadienne française pour l'avancement des sciences (ACFAS) plays a similar role for its more limited community. In every one of the past five years ACFAS had a number of PSE items on its conference agenda.

The one association devoted primarily to research on PSE is the Canadian Society for the Study of Higher Education. Formed in 1970, its membership of about 300 is based on interest in the field rather than on employment in any particular kind of institution. Thus the CSSHE attracts people from the ranks of teachers and administrators in the universities, community colleges, and institutes of technology, from other associations and from government departments and agencies. The Society holds an annual conference at which research papers are presented. It is not the regular practice to publish all of these, although a selected few appear in the Society's journal, the Canadian Journal of Higher Education. Except for papers invited for its annual conferences, this review of the state of research on PSE is the only study so far sponsored by the CSSHE.

Other societies devoted to particular disciplines or fields of study that occasionally turn their attention to PSE number at least six. All sponsor learned journals that provide additional media for the dissemination of the results of research. All hold annual conferences at which research papers are presented. In addition to those just described, learned societies at whose annual conferences papers on PSE have been presented on several occasions in recent years include:

Canadian Political Science Association
Société québécoise de science politique
Canadian Psychological Association
Canadian Sociology and Anthropology Association
Canadian Historical Association
Canadian Society for the Study of Education

One might have expected the Canadian Economics Association, the Institute of Public Administration in Canada and the Canadian Philosophical Association to appear in this list, but they have not had more than one or two, if any, research reports on PSE at their annual conferences in the past five years.

Conferences are stimulators of research. In addition, they serve as media for the dissemination of research results, to which reference is made in Chapter 5.

Societies of scholars in the humanities and social sciences are grouped in the Canadian Federation for the Humanities (CFH) and the Social Science Federation of Canada (SSFC). These two bodies exist to promote and assist scholarship and research, and they collaborate in the administration, for the SSHRC, of an aid-to-publication program.

The CFH has not undertaken or commissioned any studies recently, but in 1978 its then executive director, David Steedman, prepared a report on "The Future Employment of Ph.D. Graduates in the Humanities," and in October 1981 the Federation advertised for a "research associate."

The SSFC is active in publicizing the accomplishments and problems of social science research. In this connection, it undertakes and uses the results of studies of the organization and financing of research. Some of these projects are carried out by study groups of the Federation, some by members of the secretariat (one of whom is designated "research associate"). Recent examples include "Science Policy in Canada in the '80's: A Social Science Perspective" by John Trent (1980) and a brief to the Parliamentary Task Force on Federal-Provincial Fiscal Arrangements.

Many American and a few international societies of scholars include Canadian members. There was a time when these organizations played a more dominant role in the professional life of Canadian scholars than is now the case, but the maturing of Canadian societies, combined with the paucity of travel funds, has meant a diminution of Canadian participation in foreign bodies.

American scholarly societies in the field of PSE in which Canadians participate include the American Association for Higher Education, the Association for the Study of Higher Education and the American Educational Research Association which has just inaugurated a postsecondary education division. The (British) Society for Research into Higher Education also has a small number of Canadian members, as does HERDSA, the Higher Education Research and Development Society of Australasia. In addition to the annual conferences of such bodies as these there are other meetings that are initiated by individual universities rather than associations. Examples are the international conferences on higher education at the University of Lancaster and those on the improvement of college teaching organized by the University of Maryland, usually with a co-sponsor.

...of institutions

Mention should be made first of a number of international associations to which Canadian universities belong. They sponsor conferences and studies of aspects of higher education. Illustrative are the International Association of Universities, the Association des universités partiellement ou entièrement de langue française and the Association of Commonwealth Universities. All three of these have publication programs in addition to the proceedings of their conferences. There is the IAU Bulletin, Universités: Journal de l'AUPELF and the Commonwealth Universities Yearbook. In each edition of the Yearbook there is an essay on "The Universities of Canada" which is the best current overview of the university system. For some years it has been prepared by Robin S. Harris, who is to be succeeded as author in 1982 by Duncan D. Campbell.

Pre-eminent among the Canadian associations of institutions of PSE is the 70-year-old Association of Universities and Colleges of Canada. Almost all of the country's degree-granting universities belong, as well as a small number of colleges--most of them university affiliates, not community colleges. The AUCC serves as a medium for discussion, and occasional collective action, by its member institutions. When research into a problem of the national university community is needed, the Association may form a task force of appropriate people from the universities, it may commission a study or it may assign the task to its own secretariat which includes a division of research and analysis with a staff of three professionals.

Recent projects of note (all of which have been mentioned earlier) include a Commission to Study the Rationalization of University Research (Louis-Philippe Bonneau and J.A. Corry) whose report, Quest for the Optimum was published in 1972, a Commission on Canadian Studies (T.H.B. Symons) whose first report, To Know Ourselves (1975), has had considerable impact, and a "policy study" of financing alternatives for the universities (Peter M. Leslie) entitled Canadian Universities 1980 and Beyond (1980).

The Association has a documentation centre with an extensive collection of higher education materials, open to its members and their representatives and also, on a restricted basis, to others. Periodically, personnel of the documentation centre prepare a select bibliography of higher education (materials that have been added to the collection). Since 1974 an annual Inventory of Research into Higher Education in Canada has been compiled under the editorship of J.F. Houwing and A.M. Kristjanson of the secretariat, and for more than 20 years the AUCC has published University Affairs, a bulletin of news and feature articles which serves as a medium for brief research reports as well as reviews of reports published elsewhere.

At times in its history, the AUCC has assumed major responsibility for the cause of higher education. Its current mood is rather to concentrate on serving the interests of its members. This means that the studies and analyses it undertakes or sponsors, at least in the near future, are likely to be more related to its functions as an information centre and a lobby than to a general interest in increasing knowledge about higher education. Nevertheless, the Association intends in the future to organize a series of major conferences on issues of national concern. Thus will more PSE research be encouraged.

In addition to the national association of universities, there are two regional and two provincial associations, each of which engages in studies of the conditions under which the universities operate.

The Association of Atlantic Universities has as one of its many active sub-groups the Atlantic Provinces Inter-university Committee on the Sciences which engages in frequent analysis of university programs of teaching and research in the sciences. A recent AAU research project worthy of mention is the survey of Public Attitudes toward Post Secondary Education in the Maritime Provinces (1979) which was carried out by Andrew Hughes of the Atlantic Institute of Education.

In the province of Quebec there is a Conférence des recteurs et des principaux des universités du Québec which depends to a marked extent on studies and analyses undertaken by members of its secretariat. Recent published reports include: Analyse de quelques indicateurs du niveau de développement du système d'enseignement supérieur au Québec, de l'effort relatif de la société et du gouvernement et de la productivité des universités québécoises (1978), Etude sur le coût de vieillissement (1979) and La composition des effectifs enseignants et le niveau et la structure des traitements dans les universités du Québec (1980).

In Ontario the comparable organization is the Council of Ontario Universities. Its research division includes five officers. At present its principal areas of activity are accessibility and enrolment, education and employment, and measurement of the adequacy of university funding levels. Recent reports include The University Graduate and the Marketplace, Equality of Access to Ontario Universities, The Dynamics of Faculty Demography and A Future of Lost Opportunities?.

The Council of Western Canadian University Presidents serves as a consultative body. It has only a part-time secretariat and in recent years has not undertaken research.

The colleges and the institutes of technology are served by the national Association of Canadian Community Colleges. It stages an annual conference, usually in collaboration with the Canadian Vocational Association, and publishes, quarterly, the Journal of the Association of Canadian Community Colleges as well as a monthly bulletin, College Canada. According to its executive director, Robert LaRose, the ACCC does not engage in nor sponsor research, but it is a user of research results, and is anxious that there be more research, especially applied research, in its sector of PSE.

At the provincial level there are several college associations, including the B.C. Association of Colleges, the Alberta Association of College Faculties, the Association of Colleges of Applied Arts and Technology of Ontario, the Féderation des CEGEP and the Association des collèges du Québec. These provincial associations are not active in research, but those in Québec are associated with the Centre d'animation, de dévеloppement et de recherche en éducation (CADRE). CADRE initiates its own research, chiefly with respect to the CEGEPs, but also with respect to the universities. In addition, it accepts contracts, frequently from the provincial ministry of education.

Although it is not an association of institutions, the Educational Planning and Research Group at B.C. Research operates in somewhat the same fashion as CADRE. According to the Group's manager, Glen C. Forrester, "B.C. Research is the technical operation of an independent, non-profit industrial research society, the British Columbia Research Council." Recent projects of the Educational Planning and Research Group include follow-up studies of students from the academic and career/technical programs of B.C. colleges and institutes, and assessment of the impact of the community college system in British Columbia. The Group carries out contract research, using consultants as well as its own professional staff.

...of academic divisions

Most university faculties and schools and some academic departments and interdepartmental groups have their own national associations and their own annual meetings. This is true of accounting, agriculture, arts and science, biology, chemistry, education, environmental studies, forestry, graduate studies, law, library science, management and administrative studies, medicine, northern studies, nursing, optometry, pharmacy, physical education, rehabilitation, social work, urban and regional planning, and veterinary medicine. In some cases there are provincial associations as well.

Few of these associations undertake or sponsor research related to their functions but there are several notable exceptions.

The Canadian Association of Graduate Schools compiles and analyses, annually, data on graduate enrolment and degrees awarded. Recently the Canadian Federation of Deans of Management and Administrative Studies has sponsored studies and conferences designed, successfully, to attract support for the development of their faculties and schools. The Association of Canadian Medical Colleges has its own secretariat, including a research division with one professional, and is constantly investigating and monitoring medical education. A recent study was of the survival of students who enrolled in Canada's medical schools in 1976.

The Association of Canadian Universities for Northern Studies is planning research on the state of the art of distance learning, and in that connection has commissioned one study. Also active in studies of their fields are the Canadian Association of University School of Nursing and the Canadian Association of Schools of Social Work.

Reflecting a community of interest in adult students are the Canadian Association for University Continuing Education, which publishes the Canadian Journal of University Continuing Education, the Canadian Association for Adult Education, the Institut canadien d'éducation des adultes, and the Pacific Association for Continuing Education.

...of administrative officers

University and college presidents communicate and meet with their fellow executive heads through the associations of institutions described above, and deans associate in groupings of academic divisions. Some other university administrative officers have their particular associations, this being true of registrars, librarians, research administrators, business officers, institutional researchers, information officers, development officers, student services officers, directors of physical education and athletics, and managers of cooperative education programs. Almost none of these associations undertakes research. Of special interest in connection with this review, however, are the Canadian Association of University Business Officers (CAUBO) and the Association for Institutional Research (AIR).

CAUBO makes regular surveys of university financial statistics, property insurance and investment performance, and occasional special surveys, e.g., on early retirement and risk management. A recent study of the costs of university research was carried out by CAUBO for the Canadian Committee on Financing University Research (a joint federal-provincial body). Also, during the past year CAUBO commissioned a survey of resource allocation procedures at selected Canadian universities (Lily Arnold, 1981) and an examination of alternative university organizational structures (George B. Tracz, 1981).

The AIR, an international body, has nearly 200 Canadian members, one of whom (Bernard Sheehan) served as president several years ago and another (William Tetlow) is the current president. It holds an annual forum at which the Canadian "special interest group" has its own discussion. The possibility of breaking away to form a Canadian AIR has often been considered, but so far the advantages of the larger group have seemed superior. One of these advantages is the opportunity to disseminate the results of members' research through publications of the AIR which include the proceedings of the AIR forums, the Jossey-Bass monograph series, New Directions in Institutional Research, and the AIR's Journal of Research in Higher Education.

Another somewhat comparable organization--chiefly American but with Canadian participants--is the Society for College and University Planning (SCUP). It, too, has recently had a Canadian president (Jeffrey Holmes). Still another is the International Society of Educational Planners. Two Canadians have served as president: Cicely Watson and E.H. Humphreys, who is now in office.

AIR and SCUP are two of the 25 members of the Interassociation Management Related Group. There are also Canadian participants in several of the other member associations, most of which are based in the United States.

...of faculty

The national organization serving the interests of university faculty members is the Canadian Association of University Teachers. Its two principal activities in recent years have been the support of faculty collective bargaining, and lobbying on behalf of the universities, especially with respect to research funds. Accordingly, committees of the CAUT and members of its secretariat (one of whom is a research officer) engage in studies related to these concerns. The Association publishes The C.A.U.T. Bulletin, a medium of news and opinion in which reports of some studies are published and others are reviewed.

A few years ago the CAUT launched a monograph series in which two volumes have appeared: J. Vickers and J. Adams, But Can You Type? Canadian Universities and the Status of Women (1976) and C.K. Knapper et al., If Teaching Is Important: The Evaluation of Instruction in Higher Education (1977).

A recent project on which the CAUT and the Institute for Policy Analysis of the University of Toronto collaborated was a conference on financing Canadian universities, held in the spring of 1981. A number of papers were commissioned for the meeting and have been published in the proceedings: David M. Nowlan and Richard Bellaire, eds., Financing Canadian Universities: For Whom and By Whom? (1981).

In every province in which there are two or more universities there is a province-wide faculty organization. Of these, the Fédération des associations de professeurs d'université du Québec (FAPUQ) and the Ontario Confederation of University Faculty Associations (OCUFA), being the largest and strongest, are the most active in preparing analyses of the conditions of work and remuneration of professors.

For in-house studies, OCUFA has two research officers in its secretariat. It occasionally commissions research, e.g., a study entitled "System on the Blink: the OCUFA/CAUT/OCUA/MCU/AUCC/COU/OCGS/ACAP Interface, an Update" by Peter Roffo (1980), and co-sponsored with the Council of Ontario Universities a study by Linda Moffat entitled Room at the Bottom: Job Market Mobility Opportunities for Ontario Academics in the Mid-Seventies (1980).

...of students

The National Union of Students (since October 1981, the Canadian Federation of Students) was in the habit of presenting a brief to every national inquiry related to PSE. This required study and analysis as well as argument, and the secretariat includes a "researcher." Recent projects included submissions to the Federal-Provincial Task Force on Student Assistance and the Parliamentary Task Force on Federal-Provincial Fiscal Arrangements.

Provincial student organizations are to be found in almost every province. As an example of their studies, in 1980 the Ontario Federation of Students (now CFS Ontario) issued one entitled Sizing Up the Gap: Socio-Cultural and Economic Factors Affecting Accessibility to Post-Secondary Education in Ontario. Like the NUS, five provincial student bodies presented briefs to the Parliamentary Task Force on Federal-Provincial Fiscal Arrangements.

Still another student group that devotes some of its resources to studies is the Canadian Organization of Part-time University Students.

...of mixed membership

In addition there are organizations that behave somewhat like, but are not called, associations. At the national level these include World University Service of Canada (WUSC), Canadian University Service Overseas (CUSO) and the Canadian Bureau for International Education (CBIE). At the international level there is the International Council for Educational Development (ICED). All four are involved in international activities.

WUSC and CUSO report no research on aspects of PSE. On the other hand, the CBIE, "an organization of fee-paying member institutions, organizations and individuals," reports some. It has sponsored numerous statistical studies of foreign students (some of them by Max von Zur-Muehlen), and occasionally commissions research. In the latter category are a 1977 report entitled A Patron for the World: A Descriptive Report of the CBIE Survey of Foreign Students at Post-Secondary Institutions in Canada (David C. Neice and Peter H. Brown) and a study of the economics of foreign students in Canada which is now in progress.

The International Council for Educational Development is directed by James A. Perkins and includes among its trustees more than a score of the Western world's leading thinkers and researchers in the field of PSE. Its headquarters are in New York City and it is funded principally by foundations.

Among ICED's projects in recent yesrs is a series of summer seminars at the Aspen Institute for Humanistic Studies in Aspen, Colorado (at which Canadians have presented research papers), a comparative study of systems of higher education in 12 countries, including Systems of Higher Education: Canada (Edward Sheffield, Duncan D. Campbell, Jeffrey Holmes, B.B. Kymlicka and James H. Whitelaw, 1978), and a study of access to higher education in the Federal Republic of Germany and the USA to which Robert Pike and Mario Creet contributed a section on "Part-Time Undergraduate Studies in Ontario" (1978).

In addition to academics and administrative personnel who are on the staffs of the universities, colleges and institutes, how many people might be said to be involved in research in the associations just listed? Perhaps 30-40, of whom, say, half spend more than half their time on PSE research.

Government departments and agencies

Government departments and agencies which are or might be expected to be involved in research on aspects of PSE may be grouped as provincial, federal, federal-provincial and international.

Provincial

Provincial government departments responsible for PSE, and agencies advisory to those departments, form the largest group of governmental bodies doing, sponsoring and using the results of research on PSE.

In this respect the departments of education in the four Atlantic provinces are not regularly active. In Newfoundland, however, a Task Force on Education (R.T. Crocker and F.T. Riggs) was at work from 1978 to 1980 and produced a special report on Improving School Retention and Post-Secondary Participation (1980). And the provinces of Prince Edward Island, Nova Scotia and New Brunswick have a regional agency, the Maritime Provinces Higher Education Commission, that advises the Council of Maritime Premiers with regard to the coordination and support of PSE in the region. The MPHEC chairman, Catherine Wallace, describes the research projects assigned to the research staff (of four) or commissioned as "pragmatic, specific-problem-oriented." Recent reports include Legal Education in the Maritime Provinces (D.A. Soberman, 1976), Research Report on Engineering Education in the Maritimes (L.W. Shemilt, 1976), Planning for the 80's: Evolving Three Year Regional Planning for Higher Education in the Maritime Provinces 1980-81 to 1982-83 (1980) and Student Aid for the Eighties: Report of the Study of Financial Aid to Maritime Students (Keith Wornell et al., 1980).

The Québec Ministère de l'Education encourages research on education--in the ministry, in its advisory agencies and in the CEGEPs and universities. Each year it distributes a list of research themes that "may incite research workers to orient their work in accordance with current or developing needs" in the education system. And each year it publishes an inventory of education research projects undertaken or supported by the ministry and its advisory bodies. The inventory for the year 1980-81 (Québec, 1981) lists 97 projects related to PSE, 19 of them being carried out within the ministry and 78 outside, chiefly in universities and CEGEPs. Twenty-nine of these projects are classified as "research in the strict sense," 46 as "study and analysis" and 22 as "experimental development."

PSE research within the ministry takes place in the college and university branches and the planning division, with research staff numbering more than 20. Advisory bodies, also conducting research on PSE, include the Conseil supérieur de l'éducation, the Conseil des universités and the Conseil des collèges.

Among the many recent reports published by the ministry are: *Analyse de l'évolution de l'enseignement supérieur à la lumière d'indicateurs socio-économiques: Comparaisons Québec-Ontario de 1974-1975 à 1980-1981* (1980), *Relance à l'université* (1979) and *Relance: Etude des possibilités d'emploi des sortants de juin 1978 en fonction de la formation reçue au secteur professionnel du niveau collégial* (1980).

In its Collection Dossiers, the Conseil des universités published in 1980 a commissioned study by Clément Lemelin: *La répartition des coûts de l'enseignement universitaire*. And in August, the Conseil supérieur de l'éducation published its program of activities for 1981-82 which is to include studies of the specific role of the university and the role of university teachers.

During the 70s almost every province had an ad hoc inquiry into its system of PSE, and these generated many studies, not only by the staff or at the request of the commission of inquiry but also by the organizations and individuals responding to the public invitation to submit briefs. The reform of education in Quebec was shaped by such a commission (the Parent Commission) in the early 60s. When a decade had passed the system was in need of re-examination. The Nadeau Commission studied the CEGEPs and reported in 1975, the Angers Commission d'étude sur les universités reported in 1979 and the Jean Commission d'étude sur la formation des adultes reported in 1981.

Ontario, too, has recently had a provincial re-inquiry into the universities--by the Committee on the Future of the Universities in Ontario, chaired by H.K. Fisher, Deputy Minister of Colleges and Universities. It reported in 1981. That ministry has its own small research staff and also, on occasion, commissions studies. One of the recent staff reports of the Ministry of Colleges and Universities (MCU) was on Polytechnic Education in Ontario (1980). In 1976 a series of studies commissioned by the MCU and the Ministry of Education examined the interface between secondary and postsecondary education.

The Minister of Colleges and Universities is advised by the Ontario Council on University Affairs and the Ontario Council of Regents for Colleges of Applied Arts and Technology. The latter is not inclined to do or sponsor research, but the former is. Recent reports that provided much material for discussion were entitled System on the Brink: A Financial Analysis of the Ontario University System 1979 and System Rationalization: A Responsibility and an Opportunity (1980).

The Ontario Economic Council examines education from time to time (e.g., Issues and Alternatives 1976: Education and David Cameron's 1978 study of public policy for PSE in northern Ontario) and provides opportunities for visiting research workers to undertake studies of PSE. Ozay Mehmet's Who Benefits from the Ontario University System (1978) was the product of such an arrangement.

In Manitoba the interested government bodies take a cooperative approach to research on PSE. The Universities Grants Commission no longer does research on its own. Instead, it commissions studies by the research branches of the Department of Education and the Department of Labour and Manpower. M.P. Yakimishyn, director of the research branch of the Department of Education, explains that the branch "has responsibility for the conduct of research activities essential to support effective planning, policy-making, management and assessment of those aspects of elementary-secondary and post-secondary education under the jurisdiction of the Minister of Education"--including the Community Colleges Division of the Department, and the Universities Grants Commission.

J.E. Nykoluk, director of the research branch of the Department of Labour and Manpower, says the cooperative approach is useful because "it serves to (1) have the various interested parties more involved/informed, (2) gives all parties a stake in the research so that they are more interested in utilizing the results from this research, (3) facilitates dissemination of research results quickly and easily, (4) improves cooperation at all levels."

In the Department of Labour and Manpower there are five persons who spend some of their time in research on PSE. A recent project followed 5,000 high school graduates for up to six years to see to what extent the intentions and decisions they recorded in high school were carried out.

Both the Saskatchewan Department of Continuing Education and the Saskatchewan Universities Commission carry out studies related to the financing and management of the province's institutions of PSE. A report entitled Vo-Tech 90: Report of the Department of Continuing Education Task Force on Future Technical/Vocational Training in Saskatchewan was completed in 1979, and the Department conducts annual surveys of the plans of Grade XII students and the employment of technical/vocational graduates as well as regular program feasibility studies.

W.M. Sibley, chairman of the Saskatchewan Universities Commission, reports that the Commission "has initiated a number of studies on aspects of PSE, principally with respect to the financing, management and planning of university activities." Some have been commissioned; some have been undertaken by ad hoc committees, e.g., Report of the Agricultural Services and Research Review Committee (L.H. Shebeski et al., 1978). Others have been carried out in the universities with Commission support, and still others by members of the Commission's staff of seven professionals.

The Alberta Department of Advanced Education and Manpower is not complemented by intermediary agencies but the minister is advised by six committees: University Affairs, College Affairs, Student Affairs, Technical/Vocational Education, Further Education and Native Education. In addition, there is a statutory Universities Coordinating Council.

The Department has a large research staff of its own and also commissions studies and makes research grants. According to the deputy minister, Henry Kolesar, "Research projects supported by the Department in recent years include a policy project on Technology in Education, a Study of Humanities Education, a project entitled Dimensions of Change for Post-Secondary Education in Alberta, and an historical analysis of post-secondary education in Alberta, which has been published by the Department under the title Access to Opportunity, 1905-80."

British Columbia rivals Quebec in the number of government departments and agencies concerned with PSE. Universities and research come under the Minister of Universities, Science and Communications who is advised by the Universities Council of British Columbia. Colleges and institutes come under the Minister of Education who is advised by three bodies: the Academic Council, the Occupational Training Council and the Management Advisory Council. All six of these agencies, including the ministries, undertake, commission or support research on PSE--much of it through B.C. Research, to which reference was made in the section on Associations.

In the Yukon Territory a commissioned study of PSE needs resulted in a 1979 report entitled Toward a Yukon College, and a Special Committee on Education, aided by consultants, has adult education in its mandate. It is to report soon.

The government of the Northwest Territories did not report research on PSE.

All provinces are associated in the Council of Ministers of Education, Canada (CMEC). The Council has no research staff in its secretariat but studies are undertaken by committees or, occasionally, are commissioned. The CMEC worked jointly with the federal Department of the Secretary of State on the evaluation of official-language learning programs, and on the Federal-Provincial Task Force on Student Assistance whose report was published in 1981. Also, with the help of a research worker on contract, the secretariat prepared a Canadian document for the October 1981 OECD Intergovernmental Conference on Policies for Higher Education in the Eighties. Entitled Aspects of Postsecondary Education in Canada, it was published by CMEC in 1981. Another federal-provincial body including representation from the CMEC is the Canadian Committee on Financing University Research. As has been reported above, it has commissioned studies of university research costs.

Federal

Among the federal departments and agencies that have occasion to do or sponsor research related to PSE are the departments of National Health and Welfare (DNHW), Indian and Northern Affairs (DINA) and Labour, the Correctional Service of Canada and the Canada Employment and Immigration Commission (CEIC).

The reason for DNHW's interest is its National Health Research and Development Program of public health research grants, many of them going to university medical schools. DINA is responsible for the education of Indians on reserves and of Inuit. For the most part the PSE element of its program is concentrated on studies of access and the provision of student aid.

Recent evidence of Labour's concerns is the Commission of Inquiry on Educational Leave and Productivity (R.J. Adams, chairman) whose report was published by the Department in 1979. In addition, by means of commissioned studies, the Department is engaged in evaluating its labour education support program which for one year involved some institutions of PSE. In connection with its program of education and training in Canadian penitentiaries the Correctional Service of Canada commissions some research at the postsecondary level. The report of one such project, Effects of University of Victoria Program: A Post Release Study (Douglas Ayers et al.) was released in 1980.

The Canada Employment and Immigration Commission (CEIC) is responsible for the federal government's vast program of employment training. This breeds many in-house studies, for example the Interdepartmental Evaluation Study of the Canada Manpower Training Program: Technical Report (1977). The CEIC Task Force on Labour Market Development (David Dodge, executive coordinator) commissioned some studies on PSE. Its report to the Minister of Employment and Immigration was published in 1981.

A key department in the federal government's involvement in PSE is that of the Secretary of State (SOS). Its Education Support Programs Branch administers the federal payments to the provinces with respect to postsecondary education under the Federal-Provincial Fiscal Arrangements and Established Programs Financing Act, 1977. In anticipation of a new fiscal arrangements act for the period beginning in 1982, the Branch has been much involved lately in studies and analyses.

Since 1973 the SOS has been responsible to the Cabinet for coordinating the federal government's programs related to education, most of which are at the postsecondary level. Within a year, staff with research and analysis functions had been increased to more than a dozen, but from 1976 to 1981 that number dropped to less than half as many. Throughout the period the Branch used outside consultants and occasionally commissioned studies. Apparently it is about to expand its research and analysis function again, in connection, especially, with its concern about the achievement of national objectives for PSE. When he appeared before the Parliamentary Task Force on Federal-Provincial Fiscal Arrangements in June 1981, the then Secretary of State, Francis Fox, said: "While my department does have a small coordination staff, much of this work is handled relatively informally and by such means as task forces on particular topics. I am taking steps to strengthen our formal coordination and policy development capacity in this area."

SOS publications have been few but two staff studies, both by Bill Ahamad et al., are noteworthy: Some Characteristics of Postsecondary Students in Canada (1976) and Degree Holders in Canada: An Analysis of the Highly Qualified Manpower Survey of 1973 (1979). A commissioned study Reflections on the Symons Report: The State of Canadian Studies in 1980, by James E. Page, was published in 1981.

The Education Support Programs Branch includes a language program directorate that studies and encourages bilingualism in education at levels which include PSE. Also under its jurisdiction is a student assistance directorate of which the Canada Student Loans Program is a part. It, too, conducts appropriate studies. Much of the work for the Federal-Provincial Task Force on Student Assistance that reported in 1981 was done in SOS.

The relatively new Ministry of State for Social Development acts as the secretariat for the Cabinet Committee on Social Development. It is responsible for initiating and coordinating policy formulation and program review and assessment for government departments whose activities fall within that field, including most of the departments already mentioned. According to Magnus Gunther of the Ministry, "MSSD does research on various aspects of post-secondary education, particularly those dealing with financing under Established Programs Financing, Canadian Studies Programs, Federal-Provincial PSE relations, Manpower Training, Research and Development and Student Aid." It seldom commissions studies on PSE.

As SOS has responsibility for coordinating the federal government's programs in education, so has the Ministry of State for Science and Technology (MOSST) with respect to scientific research. It has a University Branch and, like SOS, a research staff that has varied in number over the years. Among its publications are background papers entitled Federal Funding of University Research: Major Issues and A Rationale for Federal Funding of University Research (1979), Recent Trends in Degrees Awarded and Enrolments at Canadian Universities and University Enrolment Projections to 2000 (1981). Jointly with the three granting councils and the National Research Council (see below) MOSST is currently conducting a survey of the destinations of recent recipients of the Ph.D.

In addition to being sources of funds for the support of research, the three federal granting councils, the Medical Research Council, the Natural Sciences and Engineering Research Council and the Social Sciences and Humanities Research Council, themselves engage in studies and analyses concerning their own work.

The secretary of the Medical Research Council of Canada (MRC), Dorothy J. Wright, reports that its studies "are rarely suitable for publication, although occasionally they are reported in our own Newsletter for the information of the biomedical community." As a "case in point" she draws attention to a study of "The Clinician-Scientist in Canada" by K.J. Paynter, MRC's director of special studies (1981).

The Natural Sciences and Engineering Research Council of Canada (NSERC) investigates aspects of scientific and engineering research in order to support its policy decisions. Jean-Louis Meunier, treasurer and director of finance and administration, writes that a task force on university scientific research equipment has recently reported, that problems in conducting research in the North are being studied, as well as research in forestry and future research opportunities in physics--the last of these by the Canadian Association of Physicists.

A later chapter (Chapter 6) is devoted to the Social Sciences and Humanities Research Council of Canada (SSHRC) as a source of research support. At this point it is appropriate to mention the research it does or sponsors itself with reference to its operations. There is a planning and evaluation division (of three people) that undertakes program evaluations and plans new programs. Larger studies are occasionally commissioned, e.g., of the administration of the research grants program and an evaluation of the negotiated grants program.

A favoured way of examining an area of SSHRC concern is to name a consultative group, usually including members of the Council's Advisory Academic Panel as well as experts from the universities. Examples of published reports arising from the work of such consultative groups are: Survey Research (1976), Ethics (1977), Needs of Scholars in Small Universities (1977), University Research Libraries (1978), Canadian Scholarly Publishing (1980) and University Management Education and Research: A Developing Crisis (1980).

A much larger project was that of the Commission on Graduate Studies in the Humanities and Social Sciences (Dennis Healy, Léon Dion and Blair Neatby) which reported in 1978. "A score of special investigations and studies were made by scholars on task forces at representative universities and in discipline associations to aid the commissioners with their inquiry" (SSHRC, 1978). Subsequently, SSHRC began a series of consultative group studies of education and research in selected professional fields. The first of these to report (in 1979) was with respect to business, management and administrative studies. Another, concerning legal studies, is at work, and this review is part of a similar examination of studies in education, though not by a "consultative group."

Although it is no longer a granting agency, the National Research Council of Canada must continue to study the supply and preparation of research scientists and the health of the research enterprise.

There are two monitoring agencies that have terms of reference making it appropriate for them to examine PSE, among other fields of activity: the Science Council of Canada and the Economic Council of Canada.

The Science Council has a Standing Committee on Research which, in 1979, released a report entitled University Research in Jeopardy: The Threat of Declining Enrolment (D.J. Le Roy, project officer), and also a Committee on Science and Education with a program of appropriate studies.

The Economic Council has done much research on the relation of PSE to the economy--but most of it a decade or more ago. Current research on labour markets includes a critical analysis of PSE as a supplier of needed vocational skills. An early report arising from this project was Skills and Shortages: A Summary Guide to the Findings of the Human Resources Survey (Gordon Betcherman, 1980). In addition, the Council is presently studying federal-provincial fiscal arrangements, including the effects of funding changes on PSE, in anticipation of the negotiations which will precede new legislation for the period beginning in 1982. The Council commissions studies from time to time.

In the meantime, Parliament has been engaged recently in two inquiries that have strong PSE elements: the Parliamentary Task Force on Federal-Provincial Fiscal Arrangements (Herb Breau, chairman) and the Parliamentary Task Force on Employment Opportunities for the '80s (Warren Allmand, chairman). Both undertook and comissioned studies and invited briefs. Both reported in 1981 (House of Commons, 1981a, 1981b).

Almost every PSE research project undertaken by a government department or agency, a great number of those undertaken or sponsored by associations and many projects of individual scholars rely on the data compiled and published by Statistics Canada. The Education, Science and Culture Division is the chief source of statistics on education and research, but there are others as well--the Census of Canada, for example, and the labour, merchandising, pension, construction, and prices and incomes divisions.

Statistics Canada's role is to collect, analyse and publish statistics--with emphasis on collection and publication. Its analyses normally fall short of research, but there have been notable exceptions in the work of Zoltan Zsigmond and his colleagues of the projections section, and of Max von Zur-Muehlen, also in the Education, Science and Culture Division. Resulting publications include Out of School--Into the Labour Force: Trends and prospects for enrolment, school leavers and the labour force in Canada--the 1960s through the 1980s (Z. Zsigmond et al., 1978), Job Market Reality for Postsecondary Graduates: Employment Outcome by 1978, Two Years After Graduation (W. Clark and Z. Zsigmond, 1981) and many by Max von Zur-Muehlen, of which three examples are: A Review of University Management Education in Canada (1978), Doctoral Enrolment and Graduation Patterns at Canadian Universities during the Seventies and their Implications for the Eighties: A Statistical Documentation by Discipline (1981) and Foreign Students in Canada and Canadian Students Abroad (1978).

So many researchers rely on Statistics Canada data that numbers of those responding to the questionnaires paid tribute to the agency, or criticized it for failing to meet their needs or expectations. In order to focus the interest of their users, in 1979 the Education, Science and Culture Division held a Colloquium on Data Needs for Higher Education in the Eighties. It was attended by PSE research workers from across the country and resulted in many suggestions with stress on the need for basic, accurate time series covering all types of PSE. The paucity of data on community colleges and on continuing education was a matter of special concern to the participants, and it was the agency's view that researchers make much less use of Statistics Canada resources than they could (Statistics Canada, 1979). There is little evidence, however, that the agency has followed through on these ideas. The situation may be improved in the future. A new group has just been formed at Statistics Canada for research, development and analysis of social statistics.

Federal-Provincial

A growing number of agencies and projects in the field of PSE are joint federal-provincial government initiatives. One of these, the Canadian Committee on Financing University Research brings together representatives of the provinces, through the Council of Ministers of Education, Canada, and the federal Ministry of State for Science and Technology. As was mentioned earlier, recently it commissioned a study, by the Canadian Association of University Business Officers, of the costs of university research. Another joint venture, also mentioned above, was the Federal-Provincial Task Force on Student Assistance which associated the federal Department of the Secretary of State and the Council of Ministers of Education.

The Institute for Research on Public Policy is sponsored not only by the federal and some provincial governments, but also by the private sector. It could engage in policy-oriented research on PSE but so far has not produced any studies in that field. Currently, however, it is considering a number of possible projects related at least indirectly to PSE.

Another federal-provincial agency is needed: one to monitor education in Canada. But more of that later.

International

Research on PSE that has significance for Canada, and sometimes involves Canadian participants, is carried on by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Organisation for Economic Co-operation and Development (OECD), both intergovernmental bodies.

UNESCO's International Commission on the Development of Education (Edgar Faure, chairman) produced a report, Learning to Be (1972), that has inspired the continuing education movement in many countries, including Canada, especially Quebec. A year later, UNESCO published a series of case studies on "alternative university structures." The Canada study (1973) was by David Munroe. In recent years, however, UNESCO has been less active in this field.

OECD on the other hand, has become more active, especially through its Centre for Educational Research and Innovation (CERI). One Canadian contribution to the OECD programs of research on PSE was New College Systems in Canada (Cicely Watson, 1973).

In the mid-70s it was decided that Canada should be subject to an OECD examination of its education policy. In preparation for the visit of the team of examiners, provincial and federal authorities prepared extensive reports. The final report of the examiners, Review of National Policies for Education: Canada (1976), was the first-ever document scrutinizing the Canadian education system(s), PSE included.

Preparation for Canadian participation in OECD conferences is often the stimulus for a review and analysis that probably would not otherwise be undertaken. This was the case when the National Report of Canada was prepared by "the Canadian authorities" for OECD's Intergovernmental Meeting on Vocational Education and Training in 1978. It was the case also (as has been mentioned above) when the Council of Ministers of Education prepared the report on Aspects of Postsecondary Education in Canada for OECD's Intergovernmental Conference on Policies for Higher Education in the Eighties, in 1981.

Another recent OECD report to which Canadians contributed, and which has had a strong impact in Canada, is The Future of University Research (1981).

Can an estimate be made of the number of staff in government departments and agencies who are engaged from time to time in research on PSE? Let us say about 90 in the provinces and 60 at the federal level, a total of something like 150, of whom perhaps 100 are full-time researchers.

Private consultants

Mention has been made above, on several occasions, of the commissioning of research on PSE to private consultants. Some of these are large firms of management consultants, which may have special higher education officers; some are small groups or individual enterprises, often of university faculty members. They may provide a variety of professional services, including market research (e.g. potential demand for part-time studies) or analysis of such administrative elements as pension funds, salary scales or computer requirements.

Canadian members of the Association for Institutional Research include five consultants. There are many more who spend at least part of their time on PSE projects, but no estimate is offered of the total number.

4. SOME GENERALIZATIONS, OBSERVATIONS AND SUGGESTIONS

In this chapter some generalizations will be drawn from the information presented in the previous chapter, especially regarding numbers and characteristics of individuals engaged in research on aspects of PSE in Canada. Observations will be made on the question of quality, on needed research, and on ways of encouraging research. Finally, resources for research will be discussed: financial support, personnel, and structures.

Numbers

At points throughout Chapter 3, estimates have been attempted of the numbers of people in each of the various groups of organizations who are currently engaged, for more or less than half of their time, in research on aspects of PSE. In TABLE 2 these estimates are pulled together and rounded, and represent an informed guess of minimum numbers.

It is estimated that of a total of roughly 750, about 60% are in the universities and about 75% are in universities, colleges and institutes taken together. About 20% are in government departments and agencies, with more at the provincial than the federal level. The number shown for associations is small, less than 10%, partly because much of the PSE research they sponsor is actually done by staff members of the universities. Government departments and agencies are better staffed for PSE research than are associations, but they, too, rely to a large extent on academics to carry out commissioned studies.

The estimates of numbers working more or less than half time on research suggest that those in the former group are concentrated in university offices of institutional research and in government, in about equal numbers, with much smaller numbers in associations. Overall, it appears that those in PSE research part time are almost twice as numerous as those working in the field most of their time.

If these estimates are anywhere near reality, the man/woman hours available each year for research on PSE research are relatively few. Not much wonder that there seems to be so little accomplished in relation to the breadth of the field.

TABLE 2. Minimum estimates of individuals engaged in research on aspects of PSE in Canada, by organizational group, 1981-82

Groups of organizations	Number of individuals Less than half time	 More than half time	 Total
Institutions of PSE			
Universities			
Faculty			
- in centres for the study of PSE	13	2	15
- others in faculties of education	25	-	25
- in other faculties	90	-	90
Graduate students	80	40	120
Administrative personnel	100	100	200
Colleges and institutes	100	-	100
Sub-totals	408	142	550
Associations			
- of institutions	12	11	23
- others	8	12	20
Sub-totals	20	23	43
Governments			
Provincial	16	75	91
Federal	38	21	59
Sub-totals	54	96	150
TOTALS	482	261	743

Types of research

In Chapter 2, reference was made to the research categories used by the Quebec Ministry of Education for its inventory of projects undertaken or supported by the ministry: (1) research in the strict sense, (2) study and analysis, (3) experimental development. The evidence discovered in this review suggests that the first category is, on the whole, characteristic of PSE research by university faculty members and graduate students, the third is to be found chiefly in the colleges and institutes, and the second, i.e. study and analysis, is the category into which fits most of the PSE research by administrative officers in institutions of PSE and by research workers in associations and government departments and agencies.

One could speculate on how current PSE research might be divided as between fundamental on one hand and applied on the other. If such a distinction could be made it seems likely that most people would agree that almost all PSE research is applied.

Respondents were invited to identify a piece of their own research with which they were especially pleased and to indicate on what basis it had been undertaken. Of the 86 who did so, 39 (45%) said they had done it on their own initiative, 15 (17%) as an in-house assignment, 13 (15%) on contract, 11 (13%) as a thesis for an advanced degree, and 8 (9%) on invitation.

Quality

Researchers were asked what they considered to be the chief characteristics of a good piece of research on PSE. In general their response was that good research on PSE is like good research in any field. They went on to list scores of ways in which such good research is distinguished. A number of illustrative statements are reproduced:

"Deals with realistic frameworks. However narrow the particular study, it should look toward the incorporation of its findings into integrative or holistic models and analyses. Elucidates its framework and assumptions (where appropriate to the topic). Does not ignore whatever body of 'expert knowledge' is accessible..." (C.F. Atkinson).

"In the field of history, the studies should place the institution, the individual, or the issue(s) in their proper historical context" (Paul Axelrod).

"...a clear definition of the intent of the study, a good data collection system with representative sampling, good analysis of data, and clear reference to the real world" (A.M. Bryans).

"I prefer 'people' research; what are people (students, faculty, universities, etc.) doing, and why? Ideally, behaviour should be explained as well as described" (David E. Coates).

"Importance of the topic chosen, clarity and simplicity of the conceptual framework imposed on it, significance of the conclusions with respect to future action" (John S. Daniel).

"Relevant, timely, comprehensive problem; solid methodology; useful, significant, applicable results" (Janet G. Donald).

"Good research in PSE has the same characteristics as good research into any other area. It must meet the demands of the discipline involved and depends on clear conceptualizing, systematic methodology, the integrity of the researcher, and basic writing skills" (Margaret Gillett).

"Readability; asking interesting and significant questions, and answering them honestly (or trying to); opening up new sources and subjects" (Michiel Horn).

"...selection of a problem or issue that is truly important...; thoroughness with which the research itself has been conducted...; creative insights that the researcher is able to derive on the basis of his study" (Christopher K. Knapper).

"In addition to currency, significance, mastery or comprehension of the topic, appropriate or novel methodology, sound and inclusive analysis and clarity are important..." (Daniel W. Lang).

"A good piece of research on PSE enables the practical university teacher/researcher/administrator not only to have a clearer insight into what he is doing, but can be applied by giving rise to practical recommendations" (R.F. Salisbury).

"...une activité qui vise systématiquement la découverte ou le développement d'un domaine de connaissances. Cette activité se base sur l'analyse critique d'hypothèses dans le but d'établir des relations causales qui devront se vérifier dans la réalité. Cette activité peut conduire à la formulation d'une théorie ou à son application" (Fernand Serre).

"Solid commitment of time and resources so that the scale and scope of the research is significant" (James M. Small).

"...gives new insights or new perspectives on teaching and/or learning in universities. It can generate either new theoretical constructs or considerations, or it can offer new strategies or suggest new approaches for practice" (Ronald A. Smith).

"...the standard attributes of any good empirical research, i.e., a clear definition and delimitation of the problem, a clear operational definition of the variables and the process by which they are to be measured, a coherent description of the methodology, and the modest and unembellished extraction of conclusions from the results" (W.A.S. Smith).

"The question being researched should be generally acknowledged as a matter of serious concern, i.e., it should not be undertaken simply as an application of technique, etc. There should be satisfactory empirical data, with little need for heroic assumptions to make data adjustments, close gaps in time series, etc. The work should be based on earlier, preliminary work, with an opportunity to make a major advance in knowledge, and hopefully in policy or program development. The results of the work should be reviewed carefully to elicit and explain their policy implications. The researcher must be rigorous in the development and use of definitions, data, methodology, and derivation of conclusions. All of the above must be written clearly" (David Stager).

"A good piece of research, if I am reading it, is one that solves or clarifies a problem for me. If I am writing it, a good piece of research is a project which clarifies or solves a problem which has been of some concern in the literature. In other words, my own research appears 'good' when it can be embedded in an historical and literary context. Someone else's research is good if it relates to my problem" (Richard Tiberius).

"I would put relevance to the Canadian environment as a chief criterion, and to provide benchmarks and yardsticks in order to put the research in perspective....Government research frequently suffers because the topic is not placed in an historical and socio-economic context...policy analysis research requires future orientation, and discussion of alternative solutions" (Max von Zur-Muehlen).

"[Provides information that] is useful to higher level decision-makers. [Uses methodology that] can be generalized to other situations and circumstances. The information is comparable to other information sources. The research can be replicated easily. Validation of the research possible. The information is actually useful and meets a need" (Barry Warrack).

"If data are used they illustrate an argument rather than replace it...the need to acknowledge that people are involved centrally must be part of the research" (Anonymous).

Although it is not easy to summarize these statements, the following is an attempt. A good piece of research on PSE starts with a significant topic or problem, delimits it so that it is researchable, makes appropriate reference to previous related work, uses effective methodology, presents material in a clear, organized fashion, makes a contribution to knowledge or understanding, and concludes with effective dissemination of results.

Indirectly, respondents' criteria for effective research were revealed by the reasons they gave for their satisfaction with a chosen piece of their own research. Of 58 projects so chosen, the researchers said they were especially pleased because the results were revealing--gave them a sense of discovery, or were evidently useful (45%), the design, methodology and research process were effective (25%), the topic was well chosen, important, timely (16%), or the results were widely disseminated and compliments were received (14%).

It was thought that the invitation to researchers to list up to ten pieces of outstanding research would help to identify a number of model projects. Some respondents replied that they knew of no outstanding Canadian research in their fields. Some referred to researchers, rather than titles, some listed only or chiefly American reports, others contributed to a list of titles that were almost all different. One reason for the variety of titles mentioned is, of course, that PSE researchers have widely different and specialized interests within the field. They read and use the documents pertinent to their own specialty and often know little about other work on PSE.

Although the names mentioned were to a considerable extent dependent on the pattern of respondents' areas of interest, it can be reported that 184 different researchers were named, 64 of them outside Canada. The Canadians mentioned more than twice, some of them more than a dozen times, were (in alphabetical order): John D. Dennison, Robin S. Harris, Charles M. Johnston, Peter M. Leslie, Hilda Neatby, Robert M. Pike, John Porter, Edward Sheffield, Arthur M. Sullivan, Thomas H.B. Symons, Max von Zur-Muehlen, Ignacy Waniewicz and Zoltan Zsigmond.

Participants in the review criticized much current research for its lack of perspective. More long-term studies are needed to take the place of short-term, rushed snapshots--done once and never repeated. Needed also are more studies that are national in scope, not confined to one institution, one province or one region. And it should be noted that PSE has three dimensions: past, present, and future. The majority of studies concentrate on the present, plus or minus a few years. Too few examine the past for its lessons. Too few anticipate the future.

There is concern, too, about the tendency of Canadian researchers to consult only, or mainly, sources in the United States, and for anglophone and francophone Canadian investigators to ignore each other's work. In his examination of the solitudes in which researchers operate, presented to the CSSHE conference in 1980, Charles Bélanger mentioned not only the francophone and anglophone solitudes, but also those in which academics and administrative personnel live, failing to appreciate each other's roles (Bélanger, 1980).

At the same conference, Louise Marcil-Lacoste drew attention to the tendency of researchers on higher education to overlook the necessity of placing research on higher education in the more general context of research on education (Marcil-Lacoste, 1980). Indeed, researchers on PSE often ignore its relationships with elementary and secondary education and with adult education. And those whose primary interest is in the universities frequently neglect the community colleges and the institutes of technology. The reverse is true too, but less often.

Bélanger expressed concern also about the fact that workers in higher education seem not to be able to make up their minds whether they should consider it a field of study or a discipline. He regretted that much "research" in the field is merely summarizing, and that too often it is undertaken in a crisis situation rather than before crises arise (Bélanger, 1980).

Also at the 1980 conference, Bernard Sheehan added: "Higher education as a field of study is not well defined and does not (yet) fit easily into the spectrum of academic disciplines. It does not, for example, have its own well defined technical language to ease communication among experts" (Sheehan, 1980).

Studies and analyses by administrative personnel in universities, colleges and institutes frequently satisfy the criteria of good research. But just as frequently they are shallow. Too often decisions are made on the basis of self-interest or opinion, even prejudice, displaying attitudes that are far from scientific.

Needed research

In preparation for discussion at the 1980 conference of the CSSHE, R.J. Baker asked a variety of people in institutions, associations and government to tell him what they considered to be the most important areas of PSE research in the 80s. In his report he listed four main groups of topics: (1) studies for management--"studies of staff aging, pensions, early retirement, university government, unionization, and above all, funding;" (2) "research into research in higher education;" (3) "evaluation of everything--programs, degrees, part-time study, 'distance' study, teaching by the new technologies...; programs where there are traditional accrediting agencies that make innovation difficult or impossible, transfer programs in community colleges, continuing education of professionals, basic education of adults...you name it." (The concern with evaluation, Baker observed, "is a reflection of a widespread concern about what we are doing in post-secondary education."); (4) "study of the roles of our various kinds of postsecondary institutions--in a sense an evaluation of roles and goals" (Baker, 1980).

Each of the contributors of papers at the 1981 CSSHE conference added more topics by identifying needed research in his or her field (see Chapter 3). Such lists of needed research could go on and on, each person thinking of more areas inadequately understood or studied. And that would be true no matter how much research had been accomplished--partly because many problems recur in new guises and under different conditions.

Another approach to identifying needed research would be to identify national objectives for PSE, and to list current issues with implications for the future.

Concerning national objectives for PSE, the Parliamentary Task Force on Federal-Provincial Fiscal Arrangements received many suggestions, including a list presented by the Secretary of State, of which those that "appear to be most in tune with the suggestions of spokesmen for the post-secondary sector and for a number of provincial governments," according to the Task Force, were the following:

> "General support of the post-secondary system objective: To assist in maintaining and strengthening a general knowledge, learning and critical capacity in the post-secondary system...which provides the infra-structure...to meet more specific objectives...with particular emphasis on pan-Canadian concerns.
>
> "Manpower objective: To promote adequate levels of training...particularly for occupations requiring highly skilled nationally and internationally mobile manpower.
>
> "Mobility objective: To minimize barriers to interprovincial mobility of students and teachers...and of graduates wishing to work in other provinces.
>
> "Research and economic growth objective: To support research and development...in order to promote economic growth and to support graduate training for the nation's overall research and development needs.
>
> "Citizenship, language and cultural identity objectives: To promote ...a sense of Canadian citizenship and identity, with particular emphasis on the nation's bilingual nature and to increase access by members of official language minorities to a full range of educational opportunities in their own language.

> "Accessibility objective: To support equality of opportunity in [student] access to the...system, by reducing geographic, socio-economic and other constraints on participation.
>
> "International relations objective: To promote Canada's international interests in matters relating to education...."
>
> (House of Commons, 1981a).

Later the Task Force said:

> "We suggest that early attention should be given to the definition of purposes in post-secondary education that are of concern to all governments. In this connection, we would see priority consideration being given to the need for more highly-qualified manpower in the 1980s, and the confirmation of existing commitments to student mobility and equality of access to post-secondary education for Canadians. Similarly, it is desirable, in our view, to ensure reasonable access in Canadian higher education for foreign students" (House of Commons, 1981a).

Regarding current issues with implications for the future, in October 1981 the OECD held an Intergovernmental Conference on Policies for Higher Education in the Eighties. While planning the Conference the secretariat made an analysis of factors affecting future trends in higher education:

> Social demand prospects: slowdown in growth of demand for higher education.
>
> Employment prospects: rising rates of unemployment, especially of young people.
>
> Financial considerations: decrease in financing in real terms.
>
> Internal dynamics of higher education institutions: mechanisms that are primarily conservative or defensive.
>
> Role of government: greater intervention.

With this as background, the following policy areas were chosen for discussion by the Conference: access to higher education; the changing relationship between higher education and working life; new patterns of authority in higher education, financing and redeployment of resources (OECD, 1980a, 1980b).

A comparable approach was that of the Society for Research into Higher Education when it planned a new, post-Robbins review of higher education in the United Kingdom. A series of eight seminars were scheduled for 1981 and 1982. The topics: higher education and the labour market; demand and access to higher education; institutional adaptation and change; the research function; the teaching function; mechanics of finance; governance and structure of higher education; higher education and the arts.

Ten years ago the Swedish National Board of Universities and Colleges launched a program of continuous research into higher education, relatively independent of the policy-making organization. According to an officer of the Board, "Its purpose is to enhance our insight concerning the role of higher education and research in society and our understanding of the conditions in which higher education is best able to accomplish its mission." Problem areas covered are: the role of higher education in society; higher education as an organization; the conditions and potentialities of research; the conditions and potentialities of education; and R & D organization and planning (Eskil Björklund, 1981).

If still more formulations of current issues with implications for the future are needed, one can turn to the presentations made by the chairmen of the university advisory bodies of Quebec and Ontario--Paule Leduc to the 1980 conference of the CSSHE and W.C. Winegard to the 1981 conference of the Canadian Association of University Business Officers.

Leduc offered several reflections on possible trends in the evolution of higher education in the near future: She began by listing four constraints:

> Enrolment: One can foresee a change in the structure of university clienteles as well as a decline in those clienteles.
>
> The demand for graduates: The needs for highly qualified manpower will continue to change in the 80s.
>
> Financial resources: The resources alloted by the state to higher education are not likely to increase as rapidly as inflation.
>
> Accountability: The university will feel even greater pressure to render more complete accounts of its activities.

These, she said, represent challenges to the university, challenges it must meet if it is not to lose much of its influence (Leduc, 1980).

As reported in University Affairs (September 1981), Winegard drew attention to external realities requiring change by the universities, including declining enrolment, the shift in student preferences, the need for relevance in research, and the change in public attitudes toward universities. Also, he identified internal pressures on universities, including the aging faculty problem, obsolete equipment, and the 1960s growth mentality.

In a paper presented at the 1980 Conference of Learned Societies, Martin Trow observed, as he had on previous occasions, that "most of the writing about the future of higher education is from the planner's rather than the scholar's perspective, and is directed to what might be called its public life...rather than what goes on within that environment, the processes of teaching and learning themselves...the private life of higher education" (Trow, 1980).

Taken together, the topics just mentioned confirm Trow's observation: the lists are overweighted on the "public life" side. A more balanced list of areas of needed research would be:

- Purpose, goals
- Access, admission
- Curriculum
- Teaching and learning
- Assessment and certification
- Research and scholarship
- Community services
- Outcomes
- Institutional government
- Institutional management
- Finance
- System structure and relations.

It is beyond the scope of this review to measure the extent to which these various topics have been or are being adequately studied. It is enough, perhaps, to observe, as before, that even if they have been studied in the past they will need to be studied again in the future.

Because they normally cover a wide range of problems and assemble extensive resources of funds and personnel, ad hoc commissions of inquiry overviewing whole systems of PSE have much appeal. Examples elsewhere include the Carnegie Commission on Higher Education in the U.S.A., the Swedish 1968 Education Commission, the Committee of Inquiry on Education and Training in Australia, the Robbins Committee's work in the early 60s and the current Leverhulme seminars on higher education under the auspices of the Society of Research into Higher Education in the United Kingdom.

As has been mentioned, there has been at least one province-wide inquiry into PSE in every province during the past 15 years. Were these worthwhile? At the 1980 CSSHE conference Bill Ahamad reviewed the various commission reports, asking what impact they had had. He concluded that some were more influential than others--primarily for reasons other than the quality of the study itself. Among the factors he found to be related to the success or failure of ad hoc commissions were timing, the choice of the chairman and members of the commission, the presentation and marketing of the report and plans for implementation (Ahamad, 1980).

Few attempts have been made to carry out nation-wide inquiries into PSE in Canada. Thirty years ago the Royal Commission on National Development in the Arts, Letters and Sciences included higher education and research among its areas of interest. Its report was notably influential, though some recommendations were not implemented until years later.

Five years ago, Canada's education policies (including policies for PSE) were described in one federal and four regional reviews, and then examined by an OECD team from other countries. Could one say that its report was influential? Probably not.

The fact that each province is sovereign with respect to education discourages the creation of federal education commissions and seems also to discourage interprovincial initiatives on a national scale.

Even though some provincial inquiries have not had their recommendations accepted, it must be said that such projects make use of existing research results and create more. As a consequence, the stock of knowledge about PSE is increased and enriches the resources available to future researchers and decision-makers. More provincial commissions may be expected and should be welcomed. National commissions are unlikely --unless there are great advances in federal-provincial cooperation. An alternative will be suggested later, when structures for PSE research are discussed.

Ways of encouraging research

With reference to one of the questionnaire items, most of the individual respondents described investigations they would like to undertake. A few, principally those engaged full time in institutional research or the equivalent at the system level, indicated that they suffered no impediments. For those on university faculties, for whom research is a part-time activity, the chief impediment was lack of time. Even sabbatical leave is not enough. They acknowledged that if they could find the time, money would be necessary, of course, but that could be found. This evidence confirms what Michael Skolnik reported to the 1980 CSSHE conference (see Financial Support, below).

Then there is the question of motivation. Academics are attracted to specific research tasks not only on their own initiative, but also when they are invited to undertake them, when there is fair assurance of publication of the results, when potential financial support is visibly available, or when they are offered extra payment for their work.

Social scientists and humanists on university faculties constitute a large source of underdeveloped potential for PSE research. How can more of them be involved? One possibility, of course, is to make sure that centres for the study of PSE include among their faculty members not only educationists but others. Even if the resources were available to make that possible, many academics would prefer to retain their basic departmental connection rather than join the faculty of education.

Another possibility is the one approved in principle (but not yet budgeted) for Simon Fraser University, where it is hoped that academics of a variety of related disciplines can be interested in working in or through a centre for the study of higher education without severing their departmental ties. An excellent model of this kind is the Higher Education Research Group led by Burton R. Clark at Yale University from 1973 to 1980.

The third and perhaps most realistic possibility is to persuade academics in other departments to direct their attention more often to PSE. The directors of existing centres for the study of PSE could be more active than they are in challenging their colleagues in other disciplines on their own campuses. Indeed, one of the unique opportunities presented to centres specializing in the study of PSE is to play the role of catalyst or broker. The CSSHE could plan its annual conferences to turn the spotlight on each of the other relevant disciplines in turn, expanding on the pattern followed in 1981. Also, the CSSHE might seek to interest other learned societies in scheduling more papers on PSE research at their annual meetings.

The CSSHE itself could make better use of its annual conferences to stimulate research. Program themes should highlight areas of major significance, chosen in such a way as to ensure that the Society's conferences will range over the whole field once a decade (see Needed Research, above). If individual program topics and participants were chosen well in advance (at least two years) those invited to prepare papers could be expected to make solid contributions.

It is recommended, therefore, that CSSHE conference themes be chosen for several years in advance and that individual conferences be planned at least two years before they are to take place.

According to the pattern of elections in the CSSHE, three members are added each year to the Executive Council, for a three-year term. One possibility would be to constitute each group of three as the program committee for the conference that is to take place in the third year of their term.

Good journals also stimulate research--by making possible the publication of results, even if articles are not specifically commissioned. If journals were able to pay for articles they would stimulate even more research.

Financial support

Those in need of special financial support for research are, principally, individual faculty members pursuing self-initiated investigations, and associations sponsoring projects that are beyond the capacity of their budgets. It can be assumed that research to meet university and college administrative needs, and for government departments and agencies (whether in-house or on contract) is financed from organizational funds.

At the 1980 CSSHE conference, Michael Skolnik, reporting on the need for financial support, said that after consulting a number of representative organizations and researchers he had concluded that, "at least for persons with demonstrated accomplishments, who presumably know how to prepare research proposals, obtaining funding is not a major problem." However, "the likelihood of obtaining funding depends significantly upon the particular issues and subjects within higher education which are proposed for study." He estimated that the total annual expenditure on PSE research was probably between $2 million and $4 million, of which a minor portion is supplied by the SSHRC.

Summing up, Skolnik observed: "Availability of money is obviously not the only...or...even the major factor in creating a supportive climate for research. Indeed, the availability of funding is more a reflection of the other aspects of the research climate than an independent factor..." (Skolnik, 1980).

Most universities administer research funds, including "general research grants" from the SSHRC, from which their own faculty members may get modest grants in aid of their research, whether it be on PSE or in other fields. A few private foundations make grants, sometimes for PSE research (see The Canadian Directory to Foundations and Granting Agencies, edited by Allan Arlett). The largest sums, however, are made available by government departments and agencies.

Far in the lead in this respect is the government of the province of Quebec. It has a well-financed granting agency known as Fonds FCAC (Formation des chercheurs et action concertée) some of whose awards support PSE research. On the basis of projects listed in the two most recent inventories of research on education supported by the ministry of education, it is estimated that grants in support of PSE research totaled over $1 million in 1979-80 and more than $2 million in 1980-81 (Québec, 1980, 1981).

The Ontario Ministry of Colleges and Universities does not have a program of research grants but commissions studies, and may give a contract to a researcher who, on his or her own initiative, has made a proposal in line with current ministry priorities.

In Saskatchewan, funds for research are allocated by the Saskatchewan Universities Commission from the annual operating grants provided by the province. The Commission makes planning funds available to the universities for studies they initiate. Individuals, too, can receive grants in support of research relevant to the Commission's activities.

In addition to commissioning studies, the government of Alberta provides funds for research on PSE, the main vehicle being the Project Services Fund of the Department of Advanced Education and Manpower.

The chief federal source is the SSHRC. As has been mentioned, over the ten years from 1970-71 to 1979-80 the Canada Council and its successor, the SSHRC, made grants in support of 123 individual projects of PSE research, totaling more than $1 million, or an average of about $100,000 a year--$211,000 for 19 projects in 1978-79 and $179,000 for 14 in 1979-80 (Sheffield, 1979b, updated).

In the questionnaire for individual researchers, respondents were asked to report from what source or sources, if any, they had received special financial support for their own projects. Almost half said they had no special support, many mentioned funds administered by their own university. Other sources reported included provincial and federal governments and associations.

To this point the financial needs of individual researchers have been discussed, and it appears that the situation is not bad. It is difficult, though, to find support for research enterprises--associations, for example, or a project like the suggested institute for research on post-school education (see Structures, below).

Illustrative of grants to associations are those made by the Canada Council to the AUCC to help finance the Bonneau-Corry study of the rationalization of university research and the Symons Commission on Canadian Studies. Before the Canada Council was established, American foundations occasionally supported such projects of associations but help from the U.S.A. has been rare in recent years. A systematic program of adjudicated grants to PSE associations would make a significant contribution to research output.

When proposals are made for new or additional support of research on PSE, the target is usually the SSHRC. Organizations like the CSSHE would be wise to cultivate other sources as well, e.g., corporations, foundations and provincial governments. The CSSHE has a good case for support. Has it thought of adding a new class of membership--institutional or organizational--at, say, $1000 a year?

Personnel

If research on PSE were undertaken primarily by staff, students and graduates of university centres for the study of PSE, there would be concern about their numbers. In fact, as has been shown in Chapter 3, most PSE research is done by others. What is more, relatively few graduates of such programs enter research or teaching/research posts (there are few available). Most of them find administrative positions, albeit with an understanding and appreciation of research.

If there were more such centres in the universities, their principal direct contribution to PSE research would be that undertaken in the centres themselves--by faculty members, and students preparing theses. Indirectly, however, as has been suggested above, such centres can and should act as coordinators and catalysts of work done largely by others.

There are now centres for the study of PSE in universities in Victoria, Vancouver, Edmonton, Calgary, Winnipeg, Toronto, and Montreal. It would be hard to justify any more teaching centres, though, as will be suggested below, the addition of one or more research institutes would be desirable.

There are far more openings for people in institutional research and analytical roles in government departments and agencies than there are for potential professors of PSE, yet few of these positions are filled by graduates of centres for the study of PSE. None of the PSE centres emphasizes the training of PSE analysts. OISE's department of educational planning had this function, but that department was "terminated" in 1981.

As a consequence, the Higher Education Group there is likely to become more involved in the preparation of analysts. Is there need for more attention by PSE centres to the field of institutional research, or would engineers, mathematicians and economists continue to be favoured for such appointments?

Social science faculties other than education have supplied most of the personnel engaged in PSE research, not only in universities and colleges but also in government and associations. If their graduate students were given the opportunity to explore the field, even more of them could be interested in it.

Structures

Off and on for nearly 100 years the notion of a national body devoted to educational research has recurred. As was documented in a paper presented to a recent Statistics Canada colloquium (Sheffield, 1979), the idea has been implemented on just two occasions, and then for only short periods.. The provinces, which were the chief sources of funds, lost interest.

Among the suggestions made in recent years and also in the course of this review are several in favour of a university-based institute for research (or research and development) on higher education, or a network of such institutes in the main regions of Canada. If such an institute (or network) were to be established--a Utopian idea in these days--it is suggested that it be multi-disciplinary, that it cover the whole field of post-school education (not just higher education) and that it emphasize basic research.

Also current are suggestions for a federal-provincial body, with capacity for applied research, to advise governments regarding their support of PSE. One variation is that there should be established an agency to review education in Canada, a body, independent of the operating agencies, to subject Canadian education to periodic and systematic critical review, to act as a catalyst, a gadfly. It should be an agency without executive powers, whose task is to monitor, analyze and evaluate Canadian education, to publish its findings, and to offer advice to agencies capable of furthering the national interest in education.

The proposed functions are analogous to those of the Economic Council of Canada and the Science Council of Canada, and in the spirit of the 1976 OECD review of education policies in Canada.

It will be noted that this is a proposal for a body to study education, not just postsecondary education. If it were to ignore pre-school, elementary, secondary, and adult education, such a body would fall far short of its potential. It will be noted also that this is not a proposal for a federal agency but rather one reflecting the common interests of the provincial and federal governments and appropriate national education associations.

A university-based institute for research on post-school education and an intergovernmental agency to review education would complement each other, the former emphasizing basic research, the latter, applied research.

These suggestions have not been formalized as recommendations. It is unlikely that their time has come. Besides, it may be better to strengthen and marshall existing resources than to assume that one or two new structures, no matter how well conceived, could give PSE research the promotion it needs.

In the previous pages it has been suggested that the CSSHE could encourage more research on PSE by improving the planning of its conferences and by stimulating the interest of other scholarly societies in PSE as a field for conference papers. In later pages, improvements in the effectiveness of the CSSHE as an agent for dissemination of research results are proposed. It becomes evident that if the CSSHE is to realize its potential for stimulating research on PSE and for encouraging dissemination of the results, indeed for bringing a measure of coherence to the field, it must be stronger. It should have more members and it needs a permanent secretariat to provide the continuity of management that is beyond the capacity of busy officers elected for relatively short terms.

Accordingly, it is recommended that the CSSHE establish its own professional secretariat.

Several years ago, a number of associations in the field of education combined to create a federated organization: the Canadian Society for the Study of Education. The Canadian Society for the Study of Higher Education, which had been founded earlier, was invited to join the new grouping. After long consideration, the CSSHE declined, on the grounds that its membership was much more varied than those of the other component associations, many of its members being in disciplines other than education or employed in organizations other than universities, colleges and institutes--in government, for example. It was feared that within the CSSE the CSSHE would have difficulty in retaining the interest of its non-"educational" members.

The advantages of a strong society are so great, however, that this idea must be re-examined. Throughout this review it has been demonstrated that research on PSE depends largely on individuals who are not members of university faculties of education. The CSSHE must be attractive to these people as well as to the small numbers of PSE researchers who are in faculties of education. It still seems that this is more likely to be achieved if the CSSHE remains independent, as are similar associations in Australasia, Britain, and the United States.

Some respondents have suggested that the Society would serve its members better if it were to organize sub-groups with special interests--in institutional research, instructional development, continuing education, community colleges, federal-provincial relations, etc. Others advocate regional sub-groups. The test of these suggestions is whether they would strengthen or weaken the Society. The evidence gathered in this review does not indicate which would be the likely outcome.

5. DISSEMINATION

Everybody says that research results are not adequately disseminated. In this chapter attention will be drawn to the most common means of sharing the findings of PSE researchers: books, monographs, reports and periodicals; personal communication and conferences; inventories, bibliographies, abstracts, reviews and news articles; collections and indexes.

Publication

Canadian book publication in the field of PSE is relatively rare, partly because for most monographs on PSE the market is too small to attract either academic or commercial publishers. The SSHRC's program of grants for the publication of scholarly manuscripts provides for subsidies but during the past five years only six books on PSE have been published in this way.

Much more common are reports, some of them of book length, published by the organizations that sponsored the research. Government departments and agencies are prime examples, and some associations follow this practice. But publication is expensive and that reduces the number of organizational reports published.

Research done for internal use--in universities, colleges and institutes as well as in government--is seldom published. Reports and in-house projects may be duplicated for limited distribution within the organization and perhaps to a select few in similar organizations. More of them could be made public, and would be received with appreciation. Once they have served the internal purpose for which they were done, however, the time and effort required to prepare them for distribution, and to make that distribution, is more than many organizations are willing to devote.

Some notable exceptions illustrate what can be done. The Cégep du Vieux Montréal, for example, publishes and charges for documents arising out of the work of its pedagogical research and experimentation centre. A list is available from that centre on request.

Over the past two years, the president and several colleagues at the University of Manitoba have undertaken a study of the economic impact of the University on the province and studies comparing financial support of universities and participation rates in several provinces, including, of course, Manitoba. Reports of these studies were not published in a formal way, but copies were sent to the AUCC library which listed them in its select bibliography of higher education in University Affairs. They were thus in the public domain. Copies of reports so deposited in the AUCC documentation centre may be obtained from their authors or, for the cost of duplication, from the AUCC.

More and more Canadian researchers take advantage of the willingness of the Educational Resources Information Center (ERIC) to accept reports into its system. And because many researchers consult ERIC, this is a good thing to do.

Some research reports prepared in or for government may be properly classified as confidential. But many are overclassified. Happily, freedom-of-information campaigns over the past several years have begun to bear fruit. The Government of Canada has introduced an access-to-information Bill (C-43) that at the time of writing had had second reading. It provides for "access to any record under the control of a [federal] government institution," and requires each such institution to publish at least annually a description of all classes of records under its control "in sufficient detail to facilitate the exercise of the rights of access...."

In anticipation of this legislation, the Department of the Secretary of State is leading the way for federal government departments. In 1979 it prepared and distributed a list of the Department's research studies and consultants' reports, including a number dealing with PSE. The list was brought up to date in 1980 and a 1981 catalogue is to be ready late in the year. Some documents are exempt but interested persons may obtain copies of most of the listed titles, free of charge, from the Department's library. It is hoped that by 1982 microfiche copies will be available in academic libraries across the country. Some other federal departments are already following suit--Statistics Canada, for example, which published its first Listing of Supplementary Documents in 1980.

Reports prepared by and for the Canada Employment and Immigration Commission and the Ministry of State for Science and Technology are accessible in the departmental libraries but no listings of these have yet been published. Unlike the departments mentioned, the Ministry of State for Social Development does not make its in-house reports and memoranda available--on the grounds that they are prepared as advice to ministers.

The trend toward freedom of access is to be observed in the provinces too. Commissions on access to public information have reported recently in Ontario and Quebec and legislation is likely to follow. In 1980 the Ontario government announced that the public could inspect, or copy for the cost of duplication, departmental working documents--in the relevant departmental library. Access to information acts have been passed in New Brunswick and Nova Scotia and are under consideration in Newfoundland, British Columbia and Saskatchewan. But bills for this purpose have been rejected by the governments of Alberta and Manitoba (Gaudet, 1981).

It is significant to note that all but four of the 97 PSE research projects being undertaken or supported by the Quebec ministry of education in 1980-81 were intended for public distribution (Quebec, 1981).

The difficulties of arranging publication were explored by the SSHRC's consultative group on scholarly publishing whose report, Canadian Scholarly Publishing, was released in 1980. In conclusion, the group said:

> "We discussed many...proposals and concluded that there are no simple answers to the problems faced by authors and publishers....We unanimously recommend the support of a complementary variety of methods of scholarly communication. We believe that the variety we now see in Canada is desirable. We need the existing journals and presses--large and small, university and commercial--the developing scholars' cooperatives, the widespread use of inexpensive forms of 'parapublishing' (mimeographed communications, departmental and faculty seminar papers, learned society meetings and proceedings, newsletters, etc.). We also believe that to varying degrees most forms of scholarly communication need financial support--direct or indirect--from universities, granting councils, business and government, in addition to the work contributed by academics as authors, editors, referees, publishers, and distributors" (SSHRC, 1980a).

The CSSHE has a journal that serves as a medium for some article-length research reports. The Society might consider complementing this vehicle by publishing other reports in a format that is relatively inexpensive, thus engaging in what the SSHRC consultative group calls "parapublishing."

Accordingly, it is recommended that the CSSHE explore the feasibility of publishing reports of research on PSE in an inexpensive format.

Periodicals are the medium most favoured by PSE researchers for publication of their work. Researchers were asked what media they usually count on for dissemination of the results of their research. Some mentioned conferences and their proceedings, some said that their work was normally published, if at all, by the organization by which they were employed, some use the daily press, and some submit their work to ERIC. However, most offered a list of periodicals: 77 different titles. Those mentioned most frequently were the Canadian Journal of Higher Education, the Canadian Journal of Education, University Affairs, the (American) Journal of Higher Education, and Higher Education, the "international journal of higher education and educational planning." The many titles they listed and the 200 journals Harris and his colleagues had to scan for the Bibliography of Higher Education, Supplement 1981 indicate once more how dispersed the field of PSE is. No one journal could hope to cover it; no one researcher could hope to read all the journals appropriate to his or her work.

The Canadian Journal of Higher Education, sponsored by the CSSHE, was the one mentioned most frequently. Evidently, many PSE researchers rely or would like to rely on it. Since it began in 1971 it has improved year by year, yet it has several weaknesses. It was hoped in the beginning that it would appear quarterly but it has been issued only two or three times a year, and irregularly. The original goal is still valid.

Its editorial policy has evolved in an attempt to achieve an equilibrium between articles based on quantitative studies and those with a qualitative character. If it is to reflect the patterns of ressarch that have been found in this review to be characteristic of PSE, and the varied interests of the membership of the CSSHE, the Journal should publish the results of a variety of research ranging over all three of the categories identified in Chapter 2. and include as well occasional articles which could be classed as reflective inquiry.

The CJHE seldom contains articles on community colleges or institutes of technology. One reason may be that few are submitted. Another is that there are at least two other journals that seem to be more attractive to people writing about these institutions: the Canadian Journal of Education and the Journal of the Association of Canadian Community Colleges. The latter tends toward articles that are descriptive or hortatory, although reports of research appear occasionally. Robert LaRose, executive director of the ACCC, says it is their intention to re-orient the Journal toward research.

The availability of general journals in the field of PSE does not, however, alter the preference of academics in faculties other than education for publication in the journals of their own disciplines or professional fields.

In response to the question, "Is it difficult to get the results of your research disseminated?" most said it was not, although some drew attention to the difficulty of getting a book-length monograph published.

Personal communication, conferences

The importance of personal communication in the dissemination of research results must not be overlooked. Many institutional researchers begin their examination of a local problem by calling or writing to their opposite numbers for the results of similar studies elsewhere, and those colleagues respond.

Conferences have been identified above as agents for the stimulation of research. In addition, they are vehicles for dissemination. Those who attend hear what their colleagues have been discovering. If the proceedings are published or otherwise distributed, the circle of those who are informed is widened, especially if the conference papers are carefully edited and packaged. This is not worth doing, however, unless they are good. And it has been pointed out earlier that the papers are more likely to be good, i.e. substantial contributions, if the program is well planned and the participants are given plenty of time to prepare for it.

Some associations circulate abstracts of conference papers, e.g. the Association canadienne-française pour l'avancement des sciences and the Canadian Society for the Study of Education. Others, like the Canadian Political Science Association, make microfiche copies available.

Dissemination at the local level has been encouraged in Ottawa, Toronto and Montreal at meetings where recent research reports are summarized by their authors and discussed by interested persons from the vicinity who respond to a general invitation to attend. The Ottawa scheme is centred about a "Higher Education Dinner Meeting" once every six weeks or so, the Toronto pattern is a "Third Friday Series" of seminars arranged monthly by the Higher Education Group of OISE; and the Montreal program is a series of "Higher Education Seminars" at McGill.

Digests

In the preoccupation with publication, PSE research workers may forget the importance of the various kinds of digests that are possible: inventories of work in progress, bibliographies, abstracts, reviews and news stories.

Since 1974 the AUCC has compiled and published annually an Inventory of Research into Higher Education in Canada. People thought likely to be engaged in research on PSE are invited to record their current and recently completed work. The editors make no judgment of the quality or significance of items submitted, which cover a wide range. Nevertheless, the Inventory does make it possible to know what more than 300 workers in the field are up to. The 1981 edition of the Inventory was an invaluable source for this review.

Another valued annual inventory is that published by the Quebec ministry of education, listing education research projects being undertaken or supported by the ministry and its advisory agencies: Répertoire des projets de recherche en éducation. The first edition was published in 1980.

Much more exhaustive than these is the Canadian Register of Research and Researchers in the Social Sciences, including education. It is to be operational in the latter part of 1982, superseding the SocScan data base established by the Social Sciences Federation of Canada. The Register is being developed at the Social Science Computing Laboratory of the University of Western Ontario, with support from the SSHRC, and will include four categories of career information provided by the researchers themselves: "biography, professional qualifications and specialization, ongoing research, and selected publications."

In a letter addressed to social science researchers in June 1981, Edward H. Hanis, director, and S. Paula Mitchell, assistant director of the Register, said: "We expect that the resultant data base will support a wide range of useful and appropriate applications, including the construction of specialized indexes and directories, a reference service on publications and information on the structure and direction of research and the funding of research, and finding qualified assessors for grant reviews...."

The best known national bibliography of higher education (which is not limited to research documents) is A Bibliography of Higher Education in Canada, the first edition of which was edited by Robin Harris and Arthur Tremblay in 1960. Supplements edited by Robin Harris appeared in 1965 and 1971, and a 1981 supplement, edited by Robin Harris, Marcel de Grandpré, Hazel Roberts and Hugh L. Smith, is about to be published.

To ensure that the compilation of comparable bibliographic material will continue, in October 1981 the Executive Council of the CSSHE made arrangements for a network of regular readers to scan the 200-odd relevant periodicals and list items on higher education. It is hoped that this project may be assisted by the SSHRC through its new Research Tools program.

When a major study is undertaken, one of the first tasks is to compile a bibliography of appropriate materials. This was done by Gérard Rochais for the Québec Commission d'étude sur les universités and the resulting document was published separately in 1979: Bibliographie annotée de l'enseignement supérieur au Québec, Tome I: Les Universités, 1968-1978, Tome II: La formation des maîtres, 1962-1979.

Although such bibliographies provide useful guidance, it is impossible to make them complete, it is difficult to assess and select the items to be included, and the list is out of date before it is published. In an attempt to solve the problem of timeliness it was once the practice of the Canadian Journal of Higher Education to publish occasionally a group of additions to "A Select Bibliography of Higher Education in Canada." But not since 1978. Another contribution has been made over the years by the AUCC's "Select Bibliography on Higher Education"--a quarterly or more frequent listing of recent acquisitions of the Association's documentation centre. In 1981 this began to appear in University Affairs. A list of Documents reçus, each entry accompanied by an abstract, is published quarterly by the documentation centre of CADRE. These cover all education, not just PSE. Also, university theses, one of the richest sources of basic research on PSE, are listed monthly by the National Library of Canada in Canadiana and, in addition, lists of dissertations are published separately. Services of these kinds are to be encouraged.

Several of the respondents to the questionnaire suggested the preparation and publication of abstracts to bring the results of research to the PSE community. The annotations in the Rochais bibliography served in this way, but his was a one-time project. In its regular "Publications" section, University Affairs names new documents and provides a 50-word summary of their contents. That is useful, but the documents listed represent only a fraction of those recently released. College Canada, the monthly bulletin of the Association of Canadian Community Colleges (ACCC), is an appropriate medium for abstracts, but few appear.

It would be appropriate for the CSSHE to emulate its sister organization in Britain, the Society for Research into Higher Education, which publishes quarterly Research into Higher Education Abstracts. Another useful model is Labyrinth, the clearinghouse bulletin for higher education research and development units in Australia and New Zealand. It is published by the Tertiary Education Institute of the University of Queensland.

It is recommended that the CSSHE explore the feasibility of periodical publication of abstracts, in English and French, of Canadian research on PSE.

Reviews play the role of abstracts but are much more extended and also add the dimension of criticism. The CJHE has a good review section in each issue. The JACCC has none. University Affairs presents reviews from time to time (a total of three in the seven issues March to November 1981) but relies more on staff-written articles to bring research reports to the attention of its readers. The C.A.U.T. Bulletin, the seven-times-a-year organ of the Canadian Association of University Teachers, runs few reviews. The same is true of College Canada of the ACCC.

Another way of bringing research results to the attention of those interested, but busy, is the literature review. Examples are those prepared for this project and summarized in Chapter 3. Such reviews of the literature, each limited to one topic, are invited by the American Association of University Administrators and the ERIC Clearinghouse on Higher Education.

Feature articles presenting the results of PSE research are excellent in University Affairs and infrequent in the C.A.U.T. Bulletin. Campus house organs and student newspapers also report on PSE research on occasion. When the daily press gets interested in a report of research on PSE--usually when it is shocking or controversial--the results may get wide coverage. However, except in French Canada, few press services and papers have reporters specializing in education, so news stories are often inadequate. The best coverage is of reports on which well-prepared press releases have been issued by the sponsoring organization.

Collections

For the 1981 conference of the CSSHE, Marion Wilburn and Christopher Knapper prepared a paper entitled "State-of-the-art Review of Bibliographic Control in Higher Education in Canada." In it they presented the results of a survey of institutions collecting higher education materials, examining the nature of these materials and their accessibility to potential readers.

The chief collections open to non-members were found to be those of the Association of Universities and Colleges of Canada, the Ontario Institute for Studies in Education, the Centre d'animation, de développement et de recherche en éducation (CADRE), the Office of Teaching and Learning of the Council of Ontario Universities, the Alberta Department of Advanced Education and Manpower, and the Ontario Ministry of Colleges and Universities.

Attention was drawn also to several education indexes offering access to education research: the Canadian Education Index and CANADEX (Canadian Monographs in Education)--Canada-wide; ONTERIS (Ontario Educational Resources Information System)--Ontario only; a Quebec data bank in preparation by the Ministère de l'Education; and ERIC (Educational Resources Information Center)--primarily American, though including some Canadian material.

Wilburn and Knapper concluded:

"Ideally, a national level organization might take on the goal of becoming a repository of Canadian materials (research and other) on higher education. There are, however, two factors that militate against such a solution at this time: 1. the materials are so wide-ranging in content and form that it is unlikely even a national organization would wish to expend the effort necessary to collect, organize, and make available all such items; 2. it is also unlikely that the financial and other resources exist in a single organization for such an endeavour. In fact, one such national organization, the Association of Universities and Colleges of Canada, seems unwilling to make it a priority.

"A more workable alternative seems to involve cooperation among collecting agencies wherein each accepts responsibility for comprehensive collection-building in one or two areas relevant to the organization's own needs as well as the overall needs of the 'network'. Such a system, however, would have to consider the problems of financial support available and resolve the arguments over standardization of collection organization and access wherein some libraries stress professional standards (LC, Dewey, etc.) and others stress pragmatism and convenience.

"Until such a time as a more formal cooperative 'network' develops, we would encourage the further growth of informal exchange of information, already begun in this review, by means of a project to create and circulate a complete directory of organizations collecting higher education materials" (Wilburn and Knapper, 1981).

6. THE ROLE OF THE SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL OF CANADA

The SSHRC plays its role in the encouragement and funding of research in multiple and imaginative ways. In this review many approaches to the stimulation and support of research on PSE have been identified. The Council employs almost every one of them. As will be suggested in this chapter, in some instances more realistic criteria would be an improvement, it would be desirable to modify some program priorities and its processes need to be speeded up. From the point of view of research on PSE, observations will be made on the Council's programs of support for graduate studies, research, publication, learned societies and conferences, and on some matters of concern on which the Council invited specific comment. Many of these observations will apply not only to PSE but to education, indeed the social sciences and humanities, generally.

Graduate studies

In this review, no evidence was discovered that would suggest that the Council's programs of doctoral and master's fellowships need any special revision to serve the needs of PSE research.

Research grants

As was pointed out in Chapter 3, during the years 1970-71 to 1979-80 the Council made 123 awards to individuals to support their research on aspects of PSE, 19 of them for $211,000 in 1978-79 and 14 for $179,000 in 1979-80. These grants averaged nearly $12,000.

These numbers are small, but potential applicants are few. In Chapter 4, it was estimated that the number of university faculty members engaged in independent research on PSE is roughly 130. It was demonstrated that many of them find other sources of support, especially funds administered by their own universities and grants and contracts from government departments and agencies. About half reported that they received no special support for their projects and often the implication was that none had been sought. Of the respondents who said they had had experience of one or more of the programs of the SSHRC, several mentioned doctoral fellowships or leave fellowships. Only nine reported that they had received research grants; four said they had been unsuccessful in applications for research grants.

Comments on the Council's research grants program suggest that the criteria by which applications are assessed focus too narrowly on the first of the three categories of research defined in Chapter 2. (These are: (1) research in the strict sense, (2) research in the broad sense: study and analysis, and (3) experimental development.) It has been shown that much research on PSE is in the second and third categories, especially the second. Consequently, the Council is urged to modify its policy and practice to give effect to an enlarged conception of research.

An applicant for a research grant is asked, on the application form, "to provide supporting information under the following headings, as appropriate, in sufficient detail to permit an informed judgment by qualified assessors" and is told that "it is recognized that some of the categories will not be applicable to all types of research."

With respect to criteria, the five key headings are:

1. Scope and objectives of the proposed research.
2. Scholarly significance, including potential contribution to knowledge and relation to existing research and literature.
3. If applicable, its social relevance or practical importance.
4. Theoretical approach or conceptual framework, as appropriate to the particular discipline(s) involved.
5. Research plans and methods.

Concerns are expressed regarding the fourth criterion because many valid research projects on PSE are not theory-oriented. There can be no objection to the criterion as it is stated above, but researchers have gained the impression that the options offered there are overlooked during the process of assessment and decision: at each stage the criterion is narrowed.

When a grant application is sent out for adjudication, the assessors are invited to consider, "where applicable, the appropriateness and clarity of the theoretical approach" (no reference here to "conceptual framework"). At the next stage--summary of assessments, by grants officers in the SSHRC--this item is abbreviated to "theoretical approach."

It would help--not only applicants for education research grants but also many others in the social sciences and humanities--if this criterion were rephrased, and recognized throughout the assessment process, as "conceptual framework (including, if appropriate, theoretical approach)." Thus would the emphasis be placed on context and perspective without. assuming that all research must be built on established generalizations (theory).

The review has also revealed that when researchers are asked to identify outstanding pieces of PSE research they frequently list names rather than titles. This suggests that greater weight might justifiably be given to an applicant's qualifications and reputation than to the proposed project. What, then, of beginners? Perhaps the Council's "general research grants" to the universities can be counted on to serve beginners until they become established.

Respondents made it clear that, in their lists of needed resources, time comes first. The tradition of sabbatical or research leave helps to meet this need and the Council's leave fellowships provide financial support to make the time fruitful. The recently-added provision for research-time stipends, which may accompany research grants, is in accord with expressed need.

Incidentally, in its regulations regarding persons eligible to apply for research grants, the Council has recently begun to refer to those in "universities or other post-secondary institutions" rather than simply to those in "universities." This is encouraging to personnel of community colleges and institutes of technology. Apparently, however, people in the colleges and institutes have the impression that those assessing their grant applications do not understand the college/institute milieu.

In addition to research grants to individuals, the Council had, until recently, a program of negotiated grants which were made to universities, in large amounts but limited numbers, for team research projects. And it makes occasional ad hoc grants to associations to support research projects on a national scale. Examples that have been mentioned are the grants made by the Canada Council to the Association of Universities and Colleges of Canada in the early 70s. More recently, in connection with its reviews of research in professional fields, the SSHRC has made grants to the Canadian Federation of Deans of Management and Administrative Studies and the three associations engaged in the review of educational research: the Canadian Association of Deans of Education, the Canadian Society for the Study of Education and the Canadian Society for the Study of Higher Education.

Such associations and others to which reference has been made in Chapter 3 are often in a unique position to plan and manage important research projects. More would take the initiative if there were some likelihood of financial support.

It is recommended, therefore, that the SSHRC introduce a systematic program of adjudicated research grants to voluntary associations in the social sciences and humanities, including those whose focus is on post-secondary education.

Stategic grants

The Council is committed to the notion of strategic grants to encourage research on various aspects of selected themes of national concern. Beginning in 1979-80 it has made such grants for research related to the theme "aging population." Since then, six other themes have been chosen for special support: the family and socialization of children, women and the Canadian labour force, native studies, northern studies, management studies, and the human context for science and technology. More are under consideration.

Appropriate themes arising out of this review of research on PSE are: education and employment, access to education, and aims and outcomes of education.

"Education and employment" or "the education and training of qualified manpower" would be a natural. It is the national objective for PSE that was given highest priority by the Parliamentary Task Force on Federal-Provincial Fiscal Arrangements (House of Commons, 1981a) and was a central theme of the report of the Parliamentary Task Force on Employment Opportunities for the '80s (House of Commons, 1981b). It is of concern to all levels of government. It fits the primary goal of students: employment and a career. It is relevant to all levels of education beyond the elementary school: secondary, postsecondary and adult. It has many facets and would engage, indeed does now engage, the attention of researchers in many disciplines. And the chronic mismatch of labour market supply and demand requires constant study.

"Access to education" would also be appropriate for many of the same reasons, but seems not to be quite as important to Canada at this time. "Aims and outcomes of education" is a theme that is always timely, always elusive. Important as it is, it seems less likely than the others to appeal.

It is recommended, therefore, that the SSHRC add "education and employment" to the themes to which it allocates special funds for strategic grants.

Support of publication

The Council's program of aid to publication, administered by the Social Science Federation of Canada and the Canadian Federation for the Humanities is effective, though, as has been noted, few books on PSE have been subsidized. It is encouraging to note that the SSRC and the CFH have decided to publish, themselves, some monographs that have been approved for support but have not appealed to other publishers.

The support of journals is crucial. It has been argued above that journals as media for publication not only disseminate research but also stimulate it. [illegible]lars spent on journals may well yield more results than the same amount paid out as research grants. As an example, the Canadian Journal of Higher Education received an SSHRC grant of $9,737 for the year 1981. It will probably be able to publish three issues in that year and two or three in 1982. We have seen that the average research grant in support of PSE research in the two years 1978-79 and 1979-80 was about $12,000. At that rate, if one less research grant were made and its value added to the journal grant, it would make it financially possible to increase the number of issues to the goal of four a year.

Therefore, it is recommended that the Council increase its grants to journals.

Support of conferences

The Council evidently appreciates the role conferences play in encouraging research and in communicating its results. Not only does it provide, through the Social Science Federation of Canada and the Canadian Federation for the Humanities, travel grants to subsidize attendance at the annual conference of the learned societies, but also it makes ad hoc grants in support of conferences organized by universities and associations. These programs are to be applauded.

Support of learned societies

For years the Canada Council made discretionary grants to certain learned societies to help with their costs of administration. The SSHRC regularized these grants and now makes them on a systematic basis.

We have argued that a strong society, efficiently administered, is an effective agent for research and its dissemination. It can have well-planned, productive conferences. From time to time it could itself undertake research projects. Its communication with its members will encourage greater participation and more sharing. To achieve this, some societies need a paid secretariat.

Here too is a case for a shift in priorities--toward the support of the societies.

Consequently, it is recommended that the SSHRC increase further its administrative support of learned societies.

Areas of special concern

According to its president, the SSHRC's interest in this review is to identify priority issues, to examine its role in the support of education research, to discover how the numbers of successful applicants for research grants can be increased, and in particular to explore three areas of special concern: "(a) the impact of contracts on research funding: (b) the place of non-university researchers, and (c) the areas of Federal/Provincial overlap and concern" (Fortier, 1981).

It is hoped that what has been presented above will help in identifying priority issues and establishing the Council's role. Regarding numbers of successful applicants, it appears that the Council assumes the pool of potential applicants to be those who are members of faculties of education. The evidence presented here shows that for academic research on PSE the pool includes relatively few in faculties of education and more who are members of other faculties.

A related question, of course, is whether applications are of sufficiently high quality to warrant awards. There can be no argument in favour of poor proposals. It must be asked, though, whether appropriate criteria are applied. This question is answered, at least in part, by the suggestion that the Council modify its conception of significant research to include a broader range than now seems to be the case.

Respondents indicated quite clearly that some PSE research is done on contract, and that university faculty members are most often the researchers commissioned. It is not clear, however, that this has reduced appreciably the number of applications for SSHRC grants in support of PSE research.

Regarding the place of non-university researchers, it has been estimated (in Chapter 3) that less than 20% of the individuals engaged in research on PSE are staff members of university faculties. The other 80% include graduate students, and university administrative personnel, especially in offices of institutional research where research is financed on the organizational budget.

That is the case, too, for researchers in associations and in government. If there were a considerable number of research-oriented teachers in the colleges and institutes they could add to the non-university researchers who might seek support from the Council--but there are not. The administrative personnel in the colleges and institutes, like those in the universities, tend to work on institutional projects at institutional expense, but additional support would probably make more broadly applicable studies possible. The other group of potential applicants is made up of what the Council calls private scholars, most of whom are former university professors. There are not many of them engaged in PSE research but it is appropriate for the Council to continue to consider them eligible. Indeed, their applications should be welcomed.

Regarding "areas of Federal/Provincial overlap and concerns," it should be noted that some but not all provincial governments provide support for independent research on PSE, and among those that do there is a wide range in the extent of aid available. Their support, if any, is usually directed to applied research on topics related to their current concerns. And those, too, vary.

Researchers tend to seek support from the most accessible sources. When their projects match the interests of their own province and there are provincial funds available, the provincial government is probably the agency to which grant applications will be directed. If, as is often the case, this seems to be an unlikely source of support, a researcher may apply to the SSHRC.

It seems unnecessary if not impossible, therefore, for the SSHRC to try to classify education research projects as eligible or ineligible for its support on the basis of distinction between federal and provincial interests.

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APPENDICES

A. Questionnaire for organizations

B. Questionnaire for individuals

C. Respondents to the questionnaires

D. Persons invited to check and comment
   on the draft report of the review

Appendix A

Canadian Society for the Study of Higher Education
La Société canadienne pour l'étude de l'enseignement supérieur
Edward Sheffield, 104-1275 Richmond Road, Ottawa, Ontario K2B 8E3

To senior officials of organizations that from time to time undertake research on aspects of postsecondary education

Dear Colleague:

A review of the state of research on postsecondary education in Canada is being undertaken for the Canadian Society for the Study of Higher Education and the Social Sciences and Humanities Research Council of Canada.* I am hoping that you will contribute to the review by writing to me along the lines suggested by the questions below, and by distributing copies of the enclosed questionnaire (see 1 and 2 below).

Definitions. For the purpose of this review, research is interpreted broadly to include reflective inquiry and scholarship, empirical investigation, critical analysis, in-house studies for organizational use, etc.; postsecondary education includes college, institute and university education and research.

Time limit. The review is to be completed by October so I plan to work with the information received by mid-August. I hope, therefore, that you will find it convenient to respond soon to this request. (If postal service should be interrupted I shall change my plan in order to use responses received within one month of the restoration of service.)

Edward Sheffield
Coordinator of the review

June 1981

Five questions

1. Does research on aspects of postsecondary education (PSE) form at least part of the work of your organization? (If so, please make a copy of the enclosed questionnaire for each member of your staff who is engaged from time to time in research on aspects of PSE, and invite him or her to write to me.)

2. Does your organization commission studies of aspects of PSE from time to time? (If so, could you send copies of the enclosed questionnaire to those who have undertaken such work for you in recent years?)

3. Does your organization make grants in support of research on PSE? (If so, please provide me with available information on conditions and on grants made.)

4. Is your organization a user of the results of research on PSE? Please elaborate.

5. What suggestions have you for improvement of the quantity and quality of research on PSE in Canada?

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*Parallel reviews of their areas of interest are being conducted for the Canadian Society for the Study of Education and the Canadian Association of Deans of Education.

Canadian Society for the Study of Higher Education
La Société canadienne pour l'étude de l'enseignement supérieur
Edward Sheffield, 104-1275 Richmond Road, Ottawa, Ontario K2B 8E3

Pour les cadres supérieurs d'organisations qui entreprennent de temps à autre des recherches sur certains aspects de l'enseignement post-secondaire

Cher collègue,

Une enquête sur l'état de la recherche sur l'enseignement post-secondaire au Canada a été entreprise sous l'égide de la Société canadienne pour l'étude de l'enseignement supérieur et du Conseil de recherches en sciences humaines du Canada.* J'espère que vous allez contribuer à cette enquête en m'écrivant dans le sens indiqué par les questions qui suivent et en distribuant des copies du questionnaire ci-joint (voir 1 et 2 ci-dessous).

Définitions. Aux fins de notre enquête, le mot recherche est pris dans son sens général, c'est-à-dire une réflexion scientifique, un travail d'érudition, une investigation empirique, une analyse critique, des études internes à l'usage des organisations, etc.; enseignement post-secondaire comprend la recherche et l'enseignement faits dans les colleges, les instituts et les universités.

Echéancier. Cette enquête doit prendre fin en octobre; ansi, je me propose de travailler sur les données que j'aurai obtenues à la mi-août. J'espère donc que vous pourrez répondre aussitôt que possible à ces questions. (S'il y avait grève des postes, je devrai modifier mon plan et tenir compte des réponses reçues un mois après la reprise du service.)

Le coordonnateur de l'enquête

Juin 1981

Edward Sheffield

Cinq questions

1. Est-ce que la recherche sur certains aspects de l'enseignement post-secondaire (EPS) constitue au moins une partie du travail de votre organisation? (Dans l'affirmative, veuillez tirer une copie du questionnaire ci-joint pour chaque membre de votre personnel qui s'adonne, à l'occasion, à des recherches sur certains aspects de l'EPS et invitez-les à m'écrire.)

2. Est-ce que votre organisation commandite à l'occasion des études sur certains aspects de l'EPS? (Dans l'affirmative, pourriez-vous faire parvenir le questionnaire ci-joint à ceux qui ont entrepris des travaux de ce genre pour votre compte, ces dernières années?)

3. Est-ce que votre organisation accorde des subventions de recherche sur l'EPS? (Dans l'affirmative, veuillez me fournir les renseignements disponibles sur les conditions et relatifs aux subventions antérieures.)

4. Est-ce que votre organisation uitilise les résultats de recherches sur l'EPS? Prière d'expliquer.

5. Quelles suggestions avez-vous à faire pour accroître la quantité et la qualité des recherches sur l'EPS au Canada?

---

*La Société canadienne pour l'étude de l'éducation et l'Association canadienne des doyens d'éducation mènent une enquête parallèle dans leur propre domaine d'intérêt.

Appendix B

Canadian Society for the Study of Higher Education
La Société canadienne pour l'étude de l'enseignement supérieur
Edward Sheffield, 104-1275 Richmond Road, Ottawa, Ontario K2B 8E3

To people who engage from time to time in
research on aspects of postsecondary education

Dear Colleague:

A review of the state of research on postsecondary education in Canada is being undertaken for the Canadian Society for the Study of Higher Education and the Social Sciences and Humanities Research Council of Canada.* I am hoping that you will participate in the review by writing to me along the lines suggested by the questions below, and by making and sending copies of this questionnaire to others to whom you think it should be addressed. (The initial distribution has been to members of the CSSHE and a number of others.)

Definitions. For the purpose of this review, research is interpreted broadly to include reflective inquiry and scholarship, empirical investigation, critical analysis, in-house studies for organizational use, etc.; postsecondary education includes college, institute and university education and research.

Time limit. The review is to be completed by October, so I plan to work with the information received by mid-August. I hope, therefore, that you will find it convenient to respond soon to this request. (If postal service should be interrupted I shall change my plan in order to use responses received within one month of the restoration of service.)

Edward Sheffield
Coordinator of the review

Summer 1981

Eight questions

1. In a normal year, what proportion of your working time is devoted to research on postsecondary education (PSE)? If less than 50%, what other kinds of responsibility take precedence?

2. Describe briefly a piece of your own research on PSE with which you were especially pleased. Why? On what basis did you undertake it (e.g. on your own initiative, as a thesis for an advanced degree, on invitation, as an in-house assignment, on contract)? Did you have special financial support for it? If so, from what source or sources?

3. List up to ten research projects on PSE undertaken by others in recent years which, in your view, were outstanding pieces of work.

4. What, in your opinion, are the chief characteristics of a good piece of research on PSE?

5. In connection with your own research on PSE, if you have had experience of one or more of the programs of the SSHRC, please comment on that experience. How can the SSHRC improve its service to the PSE research community?

6. What media do you usually count on for dissemination of the results of your research on PSE? Name publishers, journals, etc., as appropriate. Is it difficult to get the results of your research disseminated? What could be done to improve the situation?

7. Are there PSE research projects you would like to undertake, but cannot? What are they, and why can't you?

8. What suggestions have you for improvement of the quantity and quality of research on PSE in Canada?

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*Parallel reviews of their areas of interest are being conducted for the Canadian Society for the Study of Education and the Canadian Association of Deans of Education.

Canadian Society for the Study of Higher Education
La Société canadienne pour l'étude de l'enseignement supérieur
Edward Sheffield, 104-1275 Richmond Road, Ottawa, Ontario K2B 8E3

Pour les personnes qui entreprennent de temps à autre des recherches sur certains aspects de l'enseignement post-secondaire

Cher collègue,

Une enquête sur l'etat de la recherche sur l'enseignement post-secondaire au Canada a été entreprise sous l'égide de la Société canadienne pour l'étude de l'enseignement supérieur et du Conseil de recherches en sciences humaines du Canada.* J'espère que vous participerez à cette enquête en m'écrivant dans le sens indiqué par les questions qui suivent et en tirant et en envoyant des copies de ce questionnaire à vos collègues à qui, selon vous, il devrait être adressé. (Une première diffusion a été faite aux membres de la SCEES et à un certain nombre d'autres personnes.)

Définitions. Aux fins de notre enquête, le mot recherche est pris dans son sens général, c'est-à-dire une réflexion scientifique, un travail d'érudition, une investigation empirique, une analyse critique, des études internes à l'usage des organisations, etc.; enseignement post-secondaire comprend la recherche et l'enseignement faits dans les collèges, les instituts et les universités.

Echéancier. Cette enquête doit prendre fin en octobre; ainsi, je me propose de travailler sur les données que j'aurai obtenues à la mi-août. J'espère donc que vous pourrez répondre aussitôt que possible à ces questions. (S'il y avait grève des postes, je devrai modifier mon plan et tenir compte des réponses reçues un mois après la reprise du service.)

Le coordonnateur de l'enquête

Edward Sheffield

Eté 1981

Huit questions

1. Au cours d'une année normale, quelle proportion de vos heures de travail consacrez-vous à la recherche sur l'enseignement post-secondaire (EPS)? S'il s'agit de moins de 50%, quelles autres responsabilités ont préséance?

2. Décrivez brièvement l'un de vos travaux de recherche sur l'EPS qui vous a plu tout spécialement. Pourquoi? Sur quelle base l'avez-vous entrepris (p. ex. de votre propre initiative, sous forme de thèse de diplôme avancé, sur invitation, à titre d'étude interne, en vertu d'un contrat)? Avez-vous reçu un appui financier à cet égard? Dans l'affirmative, de quelles sources?

3. Enumérez jusqu'à dix projets de recherche sur l'EPS entrepris par d'autres ces dernières années, qui, à votre avis, constituent des productions remarquables.

4. Selon vous, quelles sont les principales caractéristiques d'une recherche valable sur l'EPS?

5. Pour ce qui est de vos propres recherches sur l'EPS, si vous avez profité d'un ou de plusieurs programmes du CRSHC, veuillez nous faire part de vos commentaires. De quelle façon le CRSHC pourrait-il améliorer ses services envers le secteur de la recherche sur l'EPS?

6. Sur quels moyens comptez-vous généralement pour communiquer les résultats de vos recherches sur l'EPS? Indiquez les éditeurs, les journaux, etc. selon le cas. Avez-vous des difficultés à diffuser les résultats de vos recherches? Que pourrait-on faire pour améliorer la situation?

7. Y a-t-il des projets de recherches sur l'EPS que vous aimeriez, mais que vous ne pouvez entreprendre? Quels sont-ils et qu'est-ce qui vous empêche de le faire?

8. Quelles suggestions avez-vous à faire pour accroître la quantité et la qualité des recherches sur l'EPS au Canada?

---

*La Société canadienne pour l'étude de l'éducation et l'Association canadienne des doyens d'éducation mènent une enquête parallèle dans leur propre domaine d'intérêt.

Appendix C

Respondents to the questionnaires

Organizations

Algonquin College of Applied Arts and Technology
Association of Canadian Community Colleges
Association of Canadian Medical Colleges
Association of Canadian Universities for Northern Studies
Athabasca University
Bishop's University
B.C. Management Advisory Council
Canadian Association of Schools of Social Work
Canadian Association of University Business Officers
Canadian Bureau for International Education
Canadian Federation for the Humanities
Canadian Federation of Deans of Management and Administrative Studies
Canadian International Development Agency
Canadian Research Institute for the Advancement of Women
Capilano College
Cégep du Vieux Montréal
Concordia University
Correctional Service of Canada
Coteau Range Community College
Council of Ministers of Education, Canada
Economic Council of Canada
Fairview College
Huron College
Labour Canada
Manitoba Department of Education
Manitoba Department of Labour and Manpower
Manitoba Universities Grants Commission
Maritime Provinces Higher Education Commission
Medical Research Council of Canada
Ministry of State for Social Development
Mount Saint Vincent University
Natural Sciences and Engineering Research Council of Canada
Nova Scotia Research Foundation Corporation
Ontario Confederation of University Faculty Associations
Ontario Institute for Studies in Education
Ontario Research Foundation
Open Learning Institute
Ottawa-Carleton Industrial Training Council
Pacific Marine Training Institute
P.E.I. Department of Education
Red Deer College
Royal Roads Military College
Royal Society of Canada
St. Francis Xavier University
Saint Mary's University
St. Thomas More College
Saskatchewan Research Council
Science Council of Canada
Secretary of State Canada
Social Science Federation of Canada
Statistics Canada, Education, Science and Culture Division
Technical University of Nova Scotia
Thorneloe College, Laurentian University
Trinity College, University of Toronto
Université de Sudbury
Université du Québec à Chicoutimi
Université du Québec à Montréal
Université du Québec à Rimouski
University of Calgary
University of Guelph
University of King's College
University of Manitoba
University of Prince Edward Island
University of Toronto
University of Western Ontario
Wilfrid Laurier University
World University Service of Canada
Wycliffe College

Individuals

W.P. Adams
G.F. Atkinson
Paul Axelrod
J. Douglas Ayers
Dorothy Bartram
Michel Bellavance
W.A. Berriman
Charles H. Bélanger
Gordon Betcherman
Shep Braun
Helen J. Breslauer
A.M. Bryans
J.M. Cameron
Duncan D. Campbell
Gordon Campbell
Patricia Campbell
G. Grant Clarke
David E. Coates
Mario Creet
W.R. Crowe
John S. Daniel
Paul Davenport
Marcel de Grandpré
John D. Dennison
Janet G. Donald
David K. Foot
William R. Frisbee
Paul Gallagher
Margaret Gillett
Donald Glendenning
Alexander Gregor
Petra Hammer
Glenn Harris
Robin S. Harris
W.E. Harris
Paul Havemann
Helen Harper
Donald R. Hay
Jeffrey Holmes
Michiel Horn
Wayne B. Ingalls
Frank E. Jones
Constantine Kapsalis
John R. Kennedy
Robert Kerr
Dennis Kimberley
Norman L. Kissick
Christopher K. Knapper
B.B. Kimlicka
Y.L.J. Lam
Daniel W. Lang
Gail LaRose
Peter M. Leslie
M. Madoff
Ronald R. Martin
D.J. McCready
J.W.R. McIntyre
John E. McPeck
Noah Meltz
Lucien Michaud
John S. Moir
Desmond Morton
William R. Muir
Sheila Murray
H. Blair Neatby
Brian T. Newbold
Ross S. Parry
Pierre-Paul Proulx
G.A. Rawlyk
David L. Rennie
Earl J. Robinson
P.A. Rosati
Ruth Rose-Lizée
Janet Rosenbaum
Madeline Roy
Eva Ryten
R.F. Salisbury
Richard F. Schmid
Fernand Serre
Bernard S. Sheehan
James M. Small
Ida Smith
Ronald A. Smith
W.A.S. Smith
P. Smart
David Stager
A.M. Sullivan
W.H. Swift
Ronald Swirsky
James E. Thornton
Richard Tiberius
Richard E. Tremblay
Bernard Trotter
Max von Zur-Muehlen
M. Ross Wardle
Barry Warrack
Ron J. Welwood
Peter West
Braham Wiesman
Ian Wright
M.P. Yakimishyn
A. Daniel Yarmey
Amy E. Zelmer
Zoltan Zsigmond

Anonymous (4)

Appendix D

Persons invited to check and comment on the draft report of the review

(Those who did so are indicated by an asterisk *)

Members of the Executive Council, CSSHE

*J.H.M. Andrews, Faculty of Education, University of British Columbia
*Charles H. Bélanger, Directeur, Bureau de recherche institutionnelle, Université de Montréal (Directeur de la Revue canadienne d'enseignement supérieur)
*G. Grant Clarke, Deputy to the Executive Director, Council of Ontario Universities (CSSHE representative on the Board of Directors of the Social Science Federation of Canada)
*John S. Daniel, Vice-Rector (Academic), Concordia University (Vice-president)
*Alexander Gregor, Faculty of Education, University of Manitoba (Secretary-Treasurer)
*Roger Guindon, Recteur, Université d'Ottawa
*Jeffrey Holmes, Director, Education, Science and Culture Division, Statistics Canada (Past president)
B.A. Holmlund, Vice-president, Special Projects, University of Saskatchewan
J.J. MacDonald, Executive Vice President, St. Francis Xavier University
Louise Marcil-Lacoste, Département de philosophie, Université de Montréal
*Gilles G. Nadeau, Faculté des sciences de l'éducation, Université de Moncton
*Bernard S. Sheehan, Director, Office of Institutional Research, University of Calgary
*W.A.S. Smith, Associate Vice-President (Academic), University of Calgary (President)
*Hugh A. Stevenson, Associate Dean (Academic), Faculty of Education, University of Western Ontario
*Max von Zur-Muehlen, Coordinator of Research, Education, Science and Culture Division, Statistics Canada

Others

*Paul R. Adams, University of Calgary
*Bill Ahamad, Ottawa
*G.F. Atkinson, University of Waterloo
Paul Axelrod, Queen's University
*R.J. Baker, University of Prince Edward Island
*Peter Bartram, Seneca College of Applied Arts and Technology
W.E. Beckel, Carleton University
Bernard Bélanger, Cégep de l'outaouais
Pierre Bélanger, Université Laval
*Meriel V.M. Bradford, Ministry of State for Social Development
Helen J. Breslauer, Ontario Confederation of University Faculty Associations
*Duncan D. Campbell, University of Alberta
Gordon Campbell, University of Lethbridge
Patricia Campbell, College of Cape Breton

*John S. Chase, Simon Fraser University
*Kenneth Clements, Canadian Association of University Business Officers
Rodger Cummins, Ontario Ministry of Colleges and Universities
*David E. Coates, Woodbridge
*Marcel de Grandpré, Université de Montréal
*John D. Dennison, University of British Columbia
*Janet G. Donald, McGill University
*Paul Gallagher, Capilano College
*Margaret Gillett, McGill University
Paul-Emile Gingras, Centre d'animation, de développement et de recherche en éducation
*Robin S. Harris, University of Toronto
*Laurent Isabelle, Algonquin College of Applied Arts and Technology
*Henry Kolesar, Alberta Advanced Education and Manpower
*Abram G. Konrad, University of Alberta
A.M. Kristjanson, Association of Universities and Colleges of Canada
*B. Kymlicka, University of Western Ontario
*Daniel W. Lang, University of Toronto
*J.P. Robert LaRose, Association of Canadian Community Colleges
Paule Leduc, Ministère d'Etat au développement culturel du Québec
Clément Lemelin, Université du Québec à Montréal
Paul G. Lemire, Fédération des CEGEP
David Low, Ministry of State for Science and Technology
*Douglas J. McCready, Wilfrid Laurier University
J.W.R. McIntyre, University of Alberta
John E. McPeck, University of Western Ontario
*Jean-R. Messier, Université du Québec à Hull
*Lucien F. Michaud, Université de Sudbury
Frank Milligan, Kingston
*P.J. Murphy, University of Victoria
Sheila A. Murray, Algonquin College of Applied Arts and Technology
Jacques Noël de Tilly, Cégep du Vieux Montréal
James E. Page, Association for Canadian Studies
Paul B. Park, University of Western Ontario
Ross S. Parry, Ontario Federation of Students
*Lucien Perras, Council of Ministers of Education, Canada
*Richard Perusse, Conférence des recteurs et des principaux des universités du Québec
*Gloria Pierre, University Affairs
*Robert M. Pike, Queen's University
*G.T. Rayner, Secretary of State Canada (response from Merrick Spalding)
*D.A.G. Reid, Secretary of State Canada
*Hazel J. Roberts, Association of Universities and Colleges of Canada
Todd Rogers, University of British Columbia
Ruth Rose-Lizée, Université du Québec à Montréal
Norman Ryan, Service de la recherche, Ministère de l'Education du Québec
Eva Ryten, Association of Canadian Medical Colleges
Richard F. Salisbury, McGill University
*Donald Savage, Canadian Association of University Teachers (response from Victor W. Sim)
*H.J. Schweiger, Maritime Provinces Higher Education Commission

*William M. Sibley, Saskatchewan Universities Commission
*Michael Skolnik, Ontario Institute for Studies in Education
*David W. Slater, Economic Council of Canada
D. McCormack Smyth, York University
A.E. Soles, British Columbia Ministry of Universities, Science and Communications
*David Stager, University of Toronto
John J. Stapleton, Lakehead University
*Arthur M. Sullivan, Memorial University of Newfoundland
*W.N. Toombs, Saskatchewan Department of Continuing Education
Richard E. Tremblay, Université de Montréal
John E. Trent, Social Science Federation of Canada
Bernard Trotter, Queen's University
Martin Trow, University of California at Berkeley
*Peter West, University of Alberta
*James H. Whitelaw, Concordia University
*Marion Wilburn, Council of Ontario Universities
*Miles Wisenthal, Social Sciences and Humanities Research Council of Canada
M.P. Yakimishyn, Manitoba Department of Education
*Zoltan Zsigmond, Statistics Canada